

CMR Nuclear Explosion Database (Revision 3)

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1. Introduction and summary

The CMR (Center for Monitoring Research) Nuclear Explosion Database was first created in 1997 to provide data relevant to nuclear monitoring research (e.g. origin time, location, yield, seismic magnitude, burial depth, etc.) on all nuclear explosions (Yang et al., 1997). This **explosion** database was revised in 1998 (Revision 1; Yang et al., 1998) and in 1999 (Revision 2; Yang et al., 1999) to incorporate more data sources, particularly more accurate information. In Revision 2 data sources were also evaluated for location accuracies, and events with location errors less than 5 km were identified. Recently we have further revised the **explosion** database to include more waveform data and more up-to-date data sources (NORSAR, 1999; Atomic Weapons Establishment, 1994; Khalturin, 1999; Khalturin et al., 2000; Richards, 2000; Murphy and Jenab, 1992; Johnson et al., 1981). In this revision, Revision 3, we also revised/added some database tables to present information in more detail. In addition, we have expanded the metadata structure for initial metadata (i.e. data about data). The number of events is not changed in this revision. The purpose of this report is to provide a timely update to the pre-existing CMR reports documenting the Nuclear Explosion Database (Yang et al., 1997; 1998; 1999).

As of July 1, 2000 there are 2041 events in the **explosion** database (Table 1). There are 13407 origins and 76091 arrivals. Figures 1-9 show maps of the nuclear explosions worldwide and by various countries including China, France, Great Britain, India, Pakistan, the Soviet Union, the United States, and Unknown. For the September 22, 1979 “unknown” event, one source does identify it as a nuclear explosion by South Africa (Melman, 1997). However, we have the “responsible country” as “Unknown” due to the ambiguity in its location and absence of official confirmation.

There are 118503 waveforms for 743 explosions in the **explosion** database. Note that these waveform data were collected from a variety of data sources and converted to the CSS database version 3.0 format. Users should be cautioned that at present there are some inconsistencies in station name convention, and some errors are known to exist in the waveform data. Waveform data with improved quality control will be included in the next revision in 2001.

The explosion information is stored in an Oracle database, **explosion**, corresponding to the CSS 3.0 schema. The waveform data are stored on a designated disk. The lists of events and waveform data can be openly accessed at the PIDC web site, http://www.pidc.org/web-bin/all_pidc.pl?sp. The Oracle export of the **explosion** database and all waveforms are available for FTP at <ftp://ftp.cmr.gov/pub/explosion/baugi/2/index.html>.

In this report we use **bold** for database names, *italics* for database table/view/synonym names and **Helvetica** for table attribute names.

2. Database Structure

The **explosion** database consists of the full CSS 3.0 schema, including tables related to event characterization. The tables in the **explosion** database include: *affiliation, amplitude, arrival, assoc, cepkks, complexity, event, explo, glossary, instrument, location, netmag, network, origerr, origin, parrival, remark, sensor, site, sitechan, splp, spvar, stamag, thirdmom, timefreq, wfdisc*,

and *wftag* (Table 2). For user's convenience we have also implemented views for certain information on the explosions in the database (see Section 4). One type of view is a list of preferred solutions for each country (Appendix 3): *prefer_chn*, *prefer_fra*, *prefer_gbr*, *prefer_ind*, *prefer_pak*, *prefer Sov*, *prefer_usa* and *prefer_unk*. Another type is a list of best information for each applicable country: *best_fra*, *best_gbr*, *best Sov*, and *best_usa* (Table 2).

Three tables in the **explosion** database, *explo*, *glossary*, and *location* (Appendix 1), are not in the current CSS/IDC schema (Anderson et al., 1990; Swanger et al., 1993; IDC5.1, 1999). The first two were previously introduced for the **explosion** database (Yang et al., 1997; 1998; 1999), but are revised in this version to present more information. The *explo* table holds yield, shot name, medium, and other information. In this revision we further include explosion type and link to the *location* table. The explosion type information is deemed useful in special studies such as on the environment. The *glossary* table is used for maintenance of information on data sources and metadata (see Section 5). Maintaining such information within the database structure is very important because it can provide the users immediate information regarding the data. In this revision we further expanded this metadata structure to include pointers to files stored on disk. The *location* table contains information on test sites, including tunnel/shaft name, ground truth coordinate, elevation, and emplacement depth. Two other tables in the **explosion** database deviate from the current CSS/IDC schema somewhat. We extended the event name field in the *event* table from 15 to 32 characters in order to accommodate the nuclear explosion names. We expanded the depth range in the *origin* table to allow negative values in order to represent the height of burst of explosions in the air.

Some events have associated *arrival* data from the Reviewed Event Bulletin (**REB**) for explosions since 1994, from the ISC, and from data compiled for use by the PIDC in Joint Hypocenter Determinations (JHD; Israelsson et al., 1997a). In Revision 2 (Yang et al., 1999) we updated the *deltim* attribute in the *arrival* table for events that occurred before September 1997. New methods for estimating timing errors were installed around that time so that the measurement errors are inconsistent before and after (Israelsson et al., 1997b). Therefore we updated the *deltim* attributes to be consistent throughout the **explosion** database, as did the **REDB** (Reference Event Database; former Calibration Event Bulletin; Yang et al., 2000d) and **groundtruth** (Ground Truth Events; Yang et al., 2000c) databases. However, these events in the databases are not relocated after the *deltim* updates. Users should also be cautioned that the GSETT-3 parametric databases in the PIDC, i.e. REB, LEB (Preliminary Event Bulletin), SEL1, SEL2, SEL3 (Standard Event Listing), are not updated. Our calculations of *deltim* were done using the following formula:

$$\text{deltim} = \min(1.07, \max(0.12, 1.07 - 1.2324 * \log(\text{SNR}/3))) \text{ if there is an SNR value, or}$$
$$\text{deltim} = 0.55 \text{ if there is no SNR value, assuming SNR=7.9.}$$

In Revision 2 (Yang et al., 1999) we also updated the Norilsk station name from NRI to NRIS for the PIDC data, as did the PIDC operational databases and the **REDB** database. Users should be aware of the potential confusion between these two stations, both of which actually exist. NRI is an Academy of Science station located at (69.4000 N, 88.1000 E); NRIS is an IMS station located at (69.0061 N, 87.9964 E). Although the station name "NRI" was used in the PIDC operations before 1998, the fact is that the PIDC data always came from the station NRIS. Therefore correcting the station name from NRI to NRIS, and updating data before 1998, ensures the integrity of the information. Note that there is yet a third Norilsk station, NRIL at (69.5049 N, 88.4414 E).

There are usually multiple origins for each event in the **explosion** database. New data sources are inserted into the database as they become available. Data quality in the **explosion** database is heterogeneous in terms of both data source and data entry quality. When the time information is absent for a given data source, we default it to the date and 00:00:00 as hour:minute:second. Note that some data were typed into ASCII files from printed documents so that clerical errors are inevitable. Some data sources have accuracy better than 0.5 km in locations, while some are merely taken from the news media. Table 3 gives data sources, and estimated location accuracy for some data sources. Nuclear explosions with location accuracy better than 5 km are also copied into the **groundtruth** database (GT) where a collection of events with known location accuracy resides (Yang et al., 2000c).

The **explosion** database complies with the unique ID rule for PIDC databases in general. The IDs are obtained from the *lastid* table in the operational database. The only exception is made for the *remark* table for convenience, as was done in the other PIDC calibration databases, **ground-truth**, and **REDB**.

The *wfdisc* and *wftag* tables contain information on waveform data for nuclear explosions. All waveform data are segment-archived and stored on a designated disk, organized by date. The waveform information is inserted into the *wfdisc* table and the corresponding *evids* are inserted into the *wftag* table. Most data are from old CMR accounts, but additional data are included from the Yield Estimation Study of Maxwell Corporation for a few events that occurred between 1961 and 1993. Abundant waveform data are available for the 1998 Indian and Pakistan explosions, including data from PIDC, IRIS, Australia, Finland, and Kyrgyzstan (Table 2). In this revision, Revision 3, a large amount of NORSAR data are included for Novaya Zemlya events.

3. Data sources

3.1 Primary data sources

The **explosion** database is compiled primarily from three data sources (Yang et al., 1997; 1998; 1999). One source is from pre-existing old CMR accounts/tables for confirmed or presumed nuclear explosions worldwide from 07/16/1945 to 10/05/1993, including some waveform data and additional explosion information such as yield, shot medium, explosion type, etc. (Carter, 1992). The second source is PIDC data for announced nuclear explosions since 1994. The third is a very comprehensive **explosion** database compiled by the Australian Geological Survey Organization (AGSO at <http://www.agso.gov.au>) that covers the period 07/16/1945 to 07/29/1996. We merged these three data sets by grouping the data together for common associated events. The Australian data are indicated by an *auth* prefix of 'AUS:' and documented in the *glossary* table as 'Australian compiled data'. All depths default to 0.0 for 'AUS' data. All the remaining data are documented in the *glossary* table as 'CMR compiled data'. The more recent explosions detected by the PIDC since 1994 are indicated by an *auth* of 'PIDC_REB' and use the same *orid* and *evid* as in the REB. The waveform data have been archived as segments for explosions since 1994. Tables 3-5 include summaries on data sources, test sites and explosion types.

3.2 Additional data sources included in Revision 1

In Revision 1 (Yang et al, 1998) most events in the **explosion** database were confirmed using official listings from US, Russia, Great Britain, and France (partial). Additional accurate data sources were added for early US events (Griggs and Press, 1961), USSR PNEs (Peaceful Nuclear Explosions) (Sultanov, 1995), Satellite images for Balapan (Thurber et al, 1994) and for the 1974 Indian explosion (Gupta and Pabian, 1996), and JED (Joint Epicenter Determination) solutions for Chinese and French tests (AWE reports). The USSR PNEs are further improved and preferred origins for many Chinese events are updated in Revision 2 (see Section 3.3).

3.2.1 USSR explosion data from RFAE

In 1996 the Ministries of the Russian Federation for Atomic Energy and of Defense released a document describing all USSR nuclear weapons tests and peaceful nuclear explosions from 1949 through 1990 (Mikhailov et al, 1996). Event information includes date, location name, explosion type, test purpose, yield range, and comments. We loaded this complete listing into the **explosion** database with an author name of 'RFAE'. There are 715 events (967 shots, including 143 salvos) in total.

143 events are salvo explosions (395 separate shots), entered using **expcode** of 'NUCS_SALVO' in the *explo* table (Table 5). A salvo is defined as two or more separate explosions where a period of time between successive individual explosions does not exceed 5 seconds and where the burial points of all explosive devices can be connected by segments of straight lines, each of them connecting two burial points, and the total length does not exceed 40 kilometers (Mikhailov et al, 1996). For a salvo event multiple data entries are used in the *explo* and *origin* table in correspondence with the multiple shots, i.e. a salvo event has one **evid** and more than one **orid**. Other explosion codes include 'NACS', 'NUCS', and 'NWCS' (Table 5)

The source document for the Russian data (Mikhailov et al, 1996) groups the explosions into 28 "locations". These have been entered into the **explosion** database as "test sites". Nominal coordinates have been assigned to each test site, and may be recognized by latitude and longitude ending with ".0000" (Table 4). The user is cautioned that, with a few exceptions, these "test sites" are actually broad regions as judged by the wide dispersion of known and approximately known (e.g. ISC epicenters) coordinates of events bearing the same test site names. Time is not given in the Russian document so we set the default time as hour:minute:second of 00:00:00. Events are mapped to the existing USSR events in the **explosion** database by **jdate** and by location when possible. For multiple events that occurred on the same day we assume the entry order in the Russian document is sequential in time.

3.2.2 US nuclear explosions from NV209

DOE/NV209 (Rev. 14, 1997) listed all nuclear tests conducted by the US from July 1945 to September 1992. We loaded 1054 events and 1149 shots (including 63 salvos of 158 shots) on the list into the CMR **explosion** database. The two nuclear weapons that the US exploded over Japan, ending World War II, were included in the database. NV209 gives event coordinates for only six events, Wigwam, Yucca, Argus I, Argus II, Argus III, and Swordfish (accuracy up to degrees and minutes for Yucca and Swordfish). Otherwise only dates and location names (17 locations in total)

are given in the list, so we set the default time as hour:minute:second of 00:00:00, and used nominal coordinates for the locations as shown in Table 4. The new data can be identified by an author name of ‘NV209’ in the **explosion** database. The explosion codes are ‘NACU’, ‘NUCU’, ‘NUCUG’, ‘NWCU’, and ‘NUCU_SALVO’ (Table 5). A new country code is designated for the 24 joint US-UK events (Table 1). For multiple shots the preferred origin is assigned as the one with the highest yield, or the first shot if all shots have the same yields. For each event information on operation, name, explosion type, purpose, and yield is inserted into the *remark* table. We updated the event names in the database using the NV209 names.

3.2.3 US nuclear explosions from G+P

Griggs and Press (1961) collected information on shot times and locations for 166 US nuclear explosions along with limited seismic data between 07/16/1945 and 01/30/1958. We loaded these data into the **explosion** database with the auth of ‘G+P’. The explosion codes are ‘NAPU’, ‘NUPU’, and NWPU’ (Table 5). For operations Crossroads (1946, Bikini), Sandstone (1948, Enewetak,) and Plumbbob (1957, Coulomb B), the coordinates are not given so we used the nominal coordinates assigned for the NV209 locations. Most of the locations are given up to seconds, but for a few events the coordinates are only up to minutes. Additional information is inserted in the *remark* table regarding the operation, name, explosion type, P wave amplitude (μ), P wave period (seconds), Rayleigh wave amplitude (μ), and air shock arrival at ground (epoch time).

3.2.4 British nuclear explosions from BLACKNEST

Peter Marshall (personal communication, 1998) provided an official list of 18 UK nuclear tests in the atmosphere with information on date, name, location name, yield, and height of burst. These new UK data can be identified in the database by the auth of ‘BLACKNEST’. Time is not given in the listing so we set the default time as hour:minute:second of 00:00:00. The height is entered as negative depth in the origin table.

Along with the 24 joint US-UK underground tests given in NV209, the new UK listing enabled us to complete the UK nuclear explosions in our **explosion** database. The explosion codes of the atmospheric and underground tests are ‘NACG’ and ‘NUCUG’, respectively (Table 5).

3.2.5 French nuclear explosions from CEA/DAM

We loaded the official list of French nuclear tests at the Pacific Test Center (CEA/DAM) into the CMR **explosion** database. Information for the 175 events includes date and time (accurate to the minute and in most cases to the second), event name, location name, test mode, and released nuclear energy range. These events can be identified with auths of ‘CEA/DAM’ in the database. The test codes are ‘NACF’ and ‘NUCF’ (Table 5). Nominal coordinates are assigned as (-22.0000, -139.0000) for both test sites, Mururoa and Fangataufa (Table 4). Event names are updated in the database using names given in this official data source.

3.2.6 Balapan nuclear explosions from THURBER/SPOT

Thurber et al. (1994) presented locations for 80 suspected nuclear explosions at the Balapan (SOV) test site during 1965-1985 using LANDSAT MSS and SPOT satellite images; a similar

data set for 20 events during 1987-1989 is already in the **explosion** database with an auth of ‘THURBER/SPOT’. We loaded the 80 events into the database using the same auth name. Although these satellite data have high location accuracy, we do not choose them as preferred solutions due to the lack of origin time information.

3.2.7 Chinese and French nuclear explosions from AWE-JED

We loaded in the epicenters, origin times, and magnitudes of 17 Chinese explosions and 81 French explosions in Tuamotu obtained using JED during 1967-1989 (Atomic Weapons Establishment, 1993). These data can be identified as auth of ‘AWE-JED’ in the database.

3.3 Additional data sources included in Revision 2

In Revision 2 (Yang et al., 1999) the **explosion** database was improved using more accurate data sources (Gupta, 1993; 1995; Gupta and Rich, 1996; Khristoforov, 1998; Romney, 1998; Barker et al., 1999; NNCKR, 1999; Sultanov et al, 1999). For USSR PNEs the previous solutions (Sultanov et al., 1995) were replaced using new available information (Sultanov et al., 1999). For many Chinese events the preferred origins were chosen as the new JED solutions that were aided by satellite data (Gupta, 1995). Events in China, Novaya Zemlya, Balapan, and Indian/Pakistan were improved by the additional data sources. JHD data used at the PIDC were entered into the **explosion** database for one USSR event. Such data will be entered for many events in a future revision.

3.3.1 Novaya Zemlya events from KHRISTOFOROV

In an analysis of the monitoring of underwater and above-water nuclear explosions by hydroacoustic methods Khristoforov (1996) provided ground truth information for three underwater explosions and four near-surface explosions in Novaya Zemlya summarized by Romney (1998). We entered these data into the **explosion** database using auth of ‘KHRISTOFOROV’. This data source is chosen as the preferred solution for these 7 events.

3.3.2 Russian peaceful nuclear explosions from SULTANOV

Earlier Sultanov et al. (1995) provided origin time and event coordinates for 122 USSR peaceful nuclear explosions. These were loaded into the **explosion** database, identified by auth of ‘SULTANOV’ in Revision 1 (Yang et al., 1998). We also updated the event names using the names given by Sultanov et al. (1995). These event names are like ‘PNE:%’. In Revision 2 (Yang et al., 1999) we replaced these earlier SULTANOV solutions using more recent information (Sultanov, 1999).

Based on RFAE, two PNEs at STS are missing from the list of Sultanov et al. (1995; 1999). We also updated the names of these two events as ‘PNE’. Therefore, all the 124 PNEs can be identified in the **explosion** database with an event name like ‘PNE%’.

3.3.3 Balapan data from NNCKR

The National Nuclear Center of Kazakhstan Republic distributed a list of newly-mapped GPS locations of Balapan nuclear explosions (NNCKR, 1999; N. Belyashova and Z. Sinyova, personal

communications, 1999). It includes the 100 events whose locations are also given by ‘THURBER/SPOT’ (Thurber et al., 1993; 1994) as well as six additional events. These 106 events are indicated by an **auth** of ‘NNCKR’ in the database. The locations from these two independent data sources are in excellent agreement except for one case which has about 10 km offset (10/27/1984). Similarly to the ‘THURBER/SPOT’ data, the ‘NNCKR’ data are not made preferred solutions due to the lack of origin time information.

3.3.4 JED data for Chinese tests from GUPTA

A series of studies on Chinese nuclear tests were carried out by Gupta and his colleague (Gupta, 1993; 1995; Gupta and Rich, 1996). Satellite data were given for two Chinese explosions on 10/16/1964 (Gupta and Rich, 1995) and 10/03/1984 (Gupta, 1993), respectively. He further located 21 Chinese tests using the JED method and detailed information on error ellipses was also given (Gupta, 1995). These 23 events were entered into the database with **auth** of ‘GUPTA’, ‘GUPTA+RICH’, and ‘GUPTA-JED’, respectively. The ‘GUPTA-JED’ are chosen as preferred solutions when present, since they were referenced to locations based on satellite data.

3.3.5 JHD data used at CMR

JHD data used at CMR are entered into the **explosion** database for one USSR event on 10/26/1990 (Israelsson et al., 1997a). More such data are expected to be inserted into the **explosion** database at a later date.

3.4 Additional data sources included in Revision 3

In this revision, Revision 3, the **explosion** database is further improved using more waveform data and more up-to-date data sources (NORSAR, 1999; Atomic Weapons Establishment, 1994; Khalturin, 1999; Khalturin et al., 2000; Richards, 2000; Murphy and Jenab, 1992; Johnson et al., 1981). For Novaya Zemlya events the previous solutions (Atomic Weapons Research Establishment, 1986) were replaced using more recent available information (Atomic Weapons Establishment, 1994). Preferred origins for 30 Novaya Zemlya events and 30 small STS events are now replaced by those from Lamont (Khalturin et al., 2000; Richards, 2000). For 34 events in Novaya Zemlya we included a large data set assembled by NORSAR recently (NORSAR, 1999). A few events in USSR and US were improved by additional data sources (Murphy and Jenab, 1992; Johnson et al., 1981). Test site information is now included in the **explosion** database.

3.4.1 Waveforms for Novaya Zemlya events from NORSAR

A large set of waveform data recorded by the NORSAR network were assembled by NORSAR for USSR nuclear explosions and other events in Novaya Zelmya/European Arctic region (NORSAR, 1999). We included the 34 nuclear explosions with new NORSAR data in the **explosion** database (Appendix 2). Other events (non-nuclear) are included in a separate CMR database. For the nuclear explosions the data are mainly from the NORSAR large aperture array, with more data from some other stations for later explosions, including the NORES array, ARCES array, FINES array, and GERES array. These data are identified as ‘%/year/jdate/Y’ where Y is ‘NOA’, ‘NRS’, ‘ARC’, ‘FIN’, or ‘GER’ in the *wfdisc* table.

3.4.2 Updated AWE-JED solutions for Novaya Zemlya events

The earlier AWRE report (Atomic Weapons Research Establishment, 1986) provided JED solutions for Novaya Zemlya nuclear explosions from 1964 to 1983. These data were loaded into the **explosion** database, identified by an auth of ‘AWRE-JED’ previously. In this revision, Revision 3, we replaced these earlier AWRE-JED solutions using more recent information (Atomic Weapons Establishment, 1994). The new solutions cover a longer time period, from 1964 to 1990. They are identified by an auth of ‘AWE-JED’ in the database.

3.4.3 Novaya Zemlya events from RICHARDS

Richards (2000) provided absolute locations for 30 events in Novaya Zemlya by combining the results of previous studies (Atomic Weapons Research Establishment, 1986; Atomic Weapons Establishment, 1994) with satellite photographs and digital terrain topographic data. Among them 26 events are estimated with GT1 quality and the rest are GT2 quality. Origin times are not given in Richards (2000), and we set them the same as those in AWE-JED (Atomic Weapons Establishment, 1994). These data are included in the **explosion** database as preferred solution, identified by an auth of ‘RICHARDS’. They are also included in the **groundtruth** database as GT1/GT2 events. Note that locations for five events (1964/09/18, 1973/09/27, 1973/10/27, 1974/11/02, and 1975/10/18) in Novaya Zemlya with AWE-JED solutions are not given by Richards (2000) because they are either located with considerable uncertainty by AWE, or they took place on the southern part of the island (the SPOT study was only for the northern part).

3.4.4 Semipalatinsk events from KRR

In a recent study Khalturin et al. (2000) located 30 small events in Semipalatinsk using data from temporary and permanent seismic stations in the former USSR at distances of 500-1500 km. These data are included in the **explosion** database, identified by an auth of ‘KRR’. Almost all these events previously only had information from the official listing RFAE, except three events (10/05/1970, 08/04/1976, 12/05/1980) with information from NRDC and/or Dahlman and Israelson (1977) and one event (12/28/1988) with information from the former CMR (Center for Seismic Studies).

3.4.5 Ground truth coordinates for test sites

Khalturin compiled a list of tunnel/shaft information for the Semipalatinsk test site (Khalturin, 1999). We inserted this information into the new table, *location*, in the **explosion** database, including tunnel/shaft number, ground truth coordinates, emplacement depth, and elevation. Data are identified by an auth of ‘KHALTURIN’. The information in the *location* table is linked to the *explo* table through a newly added attribute, locid. This attribute is a location code which consists of the test site abbreviation, then ‘S’ or ‘T’ for shaft and tunnel, respectively, and followed by the shaft/tunnel name. For example, ‘STS/S1332’ stands for shaft 1332 at Semipalatinsk Test Site. Up to date such information is only available for USSR events (Mikhailov et al, 1996). Note that the information for shaft is a good indication of actual location for corresponding shots, but that for tunnels the shot location may be some distance from the tunnel opening.

3.4.6 USSR JVE solution from MURPHY+JENAB

Murphy and Jenab (1992) gave ground truth information for the USSR Joint Verification Experiment (JVE) event on 09/14/1988. This information is included in the **explosion** database, identified by an auth of 'MURPHY+JENAB'. It is also included in the **groundtruth** database as a GT0 event.

3.4.7 US Swordfish data from JOHNSON

In a declassified report on hydroacoustic data Johnson et al. (1981) revealed some ground truth information on a US underwater shot, Swordfish, on 05/11/1962. We included this information in the **explosion** database, identified by an auth of 'JOHNSON'.

3.4.8 Preferred solutions for Lop Nor events

A close examination revealed that for some Lop Nor events the AWE-JED solution may be more accurate (with GT2 quality) compared to the GUPTA-JED solution (with GT5 quality). Therefore we have chosen the AWE-JED as preferred solutions for such events (10/06/1983 and 10/03/1984) in the **explosion** database. They have also been included in the **groundtruth** database as GT2 events.

4. Event selections

As previously noted, many events have several origins (data on location, time of occurrence, and confidence bonds). The preferred origin for any given event is that listed in the *event* table under *prefor*. When possible, these were selected from data supplied by a set of preferred authors according to the following hierarchy:

G+P/SPRINGER/AEC/ERDA/DOE (for U.S. explosions)

BOCHAROV/SULTANOV (for Soviet explosions)

BOLT (for French explosions in Algeria based on data published by Duclaux and Michaud, 1970)

GUPTA-JED/AWRE-JED/AWE-JED

ISC

PDE

This hierarchy represents our judgement as to the source of the most accurate information on the coordinates and time of each explosion. In the absence of these preferred authors, preferred origins were selected from data supplied by other authors weighted according to the completeness of the information reported. Chief among these were BOLT (Bolt, 1976) and NRDC. NRDC is not made preferred author as long as there is an official listing; AUS authors are not made preferred authors if there are any CMR data. A complete event list of the preferred origins (Table 2) is given in Appendix 3, ordered by date and time for each country.

We have accepted Griggs and Press (1961; 'G+P') as the preferred author for origins of the earliest U.S. tests except for one explosion, Bikini Baker. For this event we have used shot time and coordinates published by Gutenberg and Richter (1946) rather than those in G+P, whose time appears to be off by one hour. For the Trinity event we corrected the G+P data for the same prob-

lem using the shot time given by Gutenberg (1946) who did not give coordinates which are needed as a preferred origin. We also corrected two apparent errors in longitude given by G+P for events on 11/15/1952 and 10/24/1958. For the 15 most recent events since 1994 the PDE solutions are made the preferred origins since they are based on all sources of prompt data, including PIDC data. For the RFAE and NV209 data, the preferred origin for a given event with multiple shots is the shot with highest yield. In cases where multiple shots have equal yields, the first listed shot is chosen as the preferred origin.

In a number of cases of the CMR compiled data (e.g. RFAE, NV209), nominal coordinates were inserted in the origin table (e.g. 37.0000, -116.0000) even though the basic source information indicated only the name of the test site (e.g. NTS). Such events are usually flagged by an origin time of 00:00:00 and coordinates ending in ‘.0000’.

Table 3 identifies the sources of data attributed to each “author” as accurately as we are able to do at this time. For a few events, the source cannot be identified completely, e.g., for “NEP” we can define the responsible agency, but not a specific report of that agency. For more complete source descriptions of authors designated as “AUS:%”, users should contact lhodgson@ausseis.gov.au.

We also give ground truth categories for some data source in Table 3. GTX refers to events with location accuracy better than X km (Yang et al., 2000c). We assign the origins to GT categories according to the following hierarchy:

- G+P/SPRINGER/AEC/ERDA/DOE/NV209 (for U.S. explosions; all in GT0 except a few in GT2- see Table 3)
- NNCKR/THURBER/SPOT (for Soviet explosions in Balapan; all in GT0)
- KHRISTOFOROV (for Soviet explosions in Novaya Zemlya; all in GT1)
- BOCHAROV(GT0)/SULTANOV(GT1) (for other Soviet explosions)
- GUPTA-JED/AWRE-JED/AWE-JED/JHD (all in GT5)
- GUPTA+PABIN(GT0), GUPTA+RICH(GT0), BARKER(GT1)

While the accuracy of the origin time is also crucial information, at this time we limit ourselves to location accuracy when defining GT events. A more thorough review of GT information will be given in a later revision. In addition, the accuracy of events from Sultanov et al. (1999) appears to present a diverse spectrum. We will leave the detailed adjustments to a later date. Some data from the ISC, PDE, and REB bulletins may well be GT10-GT25 events, based on the number of stations, azimuthal gap, and minimum distance for each event. However, we do not judge these seismic solutions here and it is addressed in the GT database.

The official lists from US (‘NV209’), France (‘CEA/DAM’), Great Britain (‘BLACKNEST’), and USSR (‘RFAE’) provided accurate information on the nuclear explosions in terms of event confirmation and yield. However, except shot times in the French list and the coordinates for six events in the US list, they do not include information on origin times or event coordinates. Griggs and Press (1961; ‘G+P’), Springer and Kinnaman (1971; 1975; ‘SPRINGER’) and AEC/ERDA/DOE supplied authoritative information for US or UK underground nuclear explosions; Sultanov et al. (1995; 1999; ‘SULTANOV’) and Bocharov (1989; ‘BOCHAROV’) supplied such information for some USSR nuclear explosions. Except for clerical or similar errors, the accuracy of the origin information (latitude, longitude, time) for these US and USSR tests should be well within ± 0.5 km in location and ± 0.5 second in time, except that some SULTANOV data are accurate to ± 1 km in

location and ± 1 second in time. Note that neither SULTANOV nor BOCHAROV reported locations of events in Novaya Zemlya. Khristoforov (1996) provided similarly accurate information for 7 underwater/near-surface explosions in Novaya Zemlya. For Balapan tests, the satellite data given by THURBER/SPOT and NNCKR have location accuracies better than ± 0.5 km. The GT category for each data source is given in Table 3.

There is no similar source of location information for the French tests. However, data on the underground tests in the Sahara, as reported by Bolt (1976), originally published by Duclaux and Michaud (1970) through the Academy of Science, Paris, almost certainly must be derived from authoritative sources. For the better recorded events at Mururoa, the origins obtained by author AWE-JED (Atomic Weapons Establishment, 1993) probably possess location accuracies of the order of ± 5 km. For the 1974 Indian test, the study done by Gupta and Pabian (1996) probably carries the same or better accuracy. For the Indian test on 05/11/1998 and Pakistan test on 05/28/1998, satellite data are believed as accurate as ± 1 km. We have no authoritative information for the Chinese or “Unknown” events. For the Chinese tests, AWE-JED and GUPTA-JED are probably fairly accurate (on the order of ± 5 km in location).

In the **explosion** database, all the 1056 events by the US are confirmed nuclear explosions (3 of them have no origin data other than ‘NV209’). For the 198 events by France, 175 are confirmed nuclear explosions at the Pacific Test Center between 1966 and 1991, 6 recent events are recorded by the PIDC between 1995 and 1996, and 17 events before July 1966 are probable nuclear explosions at test sites in the Sahara. For the 45 events by Great Britain, 18 events are confirmed atmospheric nuclear explosions, 24 events are confirmed underground nuclear explosions jointly with the US, and 3 others are given by ‘AUS:GLAS’ and ‘BOLT’. All the 715 events by the USSR are confirmed nuclear explosions (117 of them have no origin data other than ‘RFAE’).

Based on our best knowledge of the information in the **explosion** database, we have extracted preferred information from different data source for each event, implemented as views in the database (Table 2). For each country the information includes date, time, location, magnitude, yield, explosion type, event name, preferred author, number of solutions, and number of waveform segments. Besides the last two number counts, most of the information is extracted from the preferred solution, except that the yield is taken from the official data sources if one exists, and the mb is the largest value among different solutions for an event in the absence of a value from the preferred solution. In addition, for events with official data sources, we have also constructed separate views to include the best pieces of information for each event (Table 2). In this case, information on date, yield, test site, explosion type, and event name is taken from the official data source, and the rest of the information (e.g. time, mb, and elevation) is from the preferred origin. For USSR events, we have further incorporated the locations from ‘NNCKR’ into the best solutions for applicable events.

We cannot guarantee that all events are actually nuclear explosions, but we have eliminated a number of dubious origins from that part of the database for which the CMR is primarily responsible, e.g. “events” at NTS on dates when no U.S. tests took place. Neither can we guarantee the accuracy of all of the descriptive information on these events, even though we believe the compilers of this information have taken great care. Given the volume of the data in the database, the chance of some errors is high. Accordingly, it is ultimately the users’ responsibility to assess the

accuracy and completeness of any data sets extracted from our database, and to determine if they are sufficient for the users' intended purpose. Work to eliminate discrepancies and duplications, and to add new information as it becomes available, will continue. We appreciate data corrections from all users.

5. Metadata

In this revision, Revision 3, further effort is made in collecting metadata for the **explosion** database. Metadata are data about data, so they are useful in understanding and utilizing the information contained in the database. For example, information given in the *glossary* table is part of metadata, which describes the data source, test site, and explosion type. In this revision we expanded this table to include pointers to files stored on disk. Currently this is limited to data sources that are not available in publications (e.g. Emails). Future metadata will include a broad range of information which is deemed useful to researchers in conjunction with the data in the **explosion** database, such as satellite imageries.

6. Data access

There are several ways in accessing the information in the **explosion** database, including web page, FTP, and direct access (Yang et al., 2000a).

6.1 Web page

At the CMR explosion web site (<http://www.pidc.org/nucex>) static web pages are built based on the parametric information that is stored in the Oracle database. There users may select events by country or by test site. The former gives information not only on the preferred origin but also on all other solutions as well as waveform/station summary for each event. At this web site users can also download the latest technical report describing the explosion database as well as a collection of sample seismogram plots. This web site is also linked to the Mail Archive for news on the explosion database and to the FTP site (see below).

6.2 FTP

The Oracle export file of the **explosion** database and waveform data can be obtained through anonymous FTP at the CMR FTP site (<ftp://otto.css.gov/pub/explosion/baugi/2/index.html>). There, for each event, waveform indexes can be viewed and the waveform segments can be retrieved as a tar file. Documents, instrument response information, and database export files can also be retrieved.

6.3 Direct database access

Direct database access to the **explosion** database permits direct retrieval of all the parametric data and the index to the waveform data. This is possible for users who are familiar with Oracle database/SQL queries and who have Oracle at their home site or have CMR accounts. The SQLNet connection is: sqlplus center@alfheim. Note that the password is only available for the IDC and

NDC personnels as well as users associated with the Defense Threat Reduction Agency (DTRA) and related research programs.

7. Acknowledgments

We thank AGSO for providing us with their complete **explosion** database. In particular, we thank Spiro Spiliopoulos and Lesley Hodgson for their effort in making it possible.

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Table 1: Nuclear explosions in the explosion database as of July 2000.

Abbreviation	Country	Number of events	Official listing
CHN	China	45	-
FRA	France	198	CEA/DAM
GBR	Great Britain	21	BLACKNEST/NV209
IND	India	3	-
PAK	Pakistan	2	-
SOV	Soviet Union	715	RFAE
USA	United States	1032	NV209
USA-GBR	joint USA-GBR	24	NV209
UNKNOWN	Unknown	1	-
		2041	

Table 2: Database tables/views in the explosion database.

Name	Type	Description	Data source and time period
<i>affiliation</i>	table	Network station affiliations	
<i>amplitude</i>	table	Arrival- and origin-based amplitude measurements	
<i>arrival</i>	table	Summary information on a seismic arrival	reb: 06/10/1994-05/30/1998 CMR old accounts: 01/16/1964-08/16/1990 JHD: 10/24/1990
<i>assoc</i>	table	Data associating arrivals with origins	reb: 06/10/1994-05/30/1998 CMR old accounts: 01/16/1964-08/16/1990
<i>best_fra</i>	view	Best information for explosions by France	CEA/DAM: jdate, yield, yldmax, testsite, expcode, evname Preferred origin: time, mb, elev, lat, lon, depth, etc.
<i>best_gbr</i>	view	Best information for explosions by Great Britain	NV209/BLACKNEST: jdate, yield, yldmax, testsite, expcode, evname Preferred origin: time, mb, elev, lat, lon, depth, etc.

Table 2: Database tables/views in the explosion database.

Name	Type	Description	Data source and time period
<i>best Sov</i>	view	Best information for explosions by Soviet Union	RFAE: jdate, yield, yldmax, testsite, exp-code, evname Preferred origin: time, mb, elev, etc. NNCKR: lat, lon, depth
<i>best_usa</i>	view	Best information for explosions by USA	NV209: jdate, yield, yldmax, testsite, exp-code, evname Preferred origin: time, mb, elev, lat, lon, depth, etc.
<i>ceppks</i>	table	Cepstral analysis results	reb
<i>complexity</i>	table	Complexity event characterization parameter	reb
<i>event</i>	table	Event to origin connection	
<i>explo</i>	table	Event location and time, yield, medium, test site, explosion type, data source, remark	Australia:07/16/1945-07/29/1996 CMR old accounts: 07/16/1945-07/29/1996 reb :06/10/1994-05/30/1998 RFAE: 08/29/1949-10/24/1990 NV209: 07/16/1945-09/23/1992 G+P:04/16/1945-01/30/1958 BLACKNEST: 10/03/1952-9/23/1958 CEA/DAM: 07/02/1966-7/15/1991 SULTANOV: 01/15/1965-09/06/1988 KHRISTOFOROV: 09/21/1955-08/22/1962
<i>glossary</i>	table	Abbreviation description including data source, test site, explosion type, and responsible country	
<i>instrument</i>	table	Calibration information for stations	reb
<i>location</i>	table	Test site information	
<i>netmag</i>	table	Network magnitude	reb S+M: 2/23/1967-06/08/1996
<i>network</i>	table	Network description and identification used in <i>wfdisc</i> table	reb CMR old accounts
<i>origerr</i>	table	Errors in origin estimations	reb :06/10/1994-05/30/1998 AWE-JED:08/24/1968-11/27/1989 (FRA) AWE-JED: 06/17/1967-09/29/1988 (CHN) GUPTA-JED: 06/17/1967-09/25/1992

Table 2: Database tables/views in the explosion database.

Name	Type	Description	Data source and time period
<i>origin</i>	table	Summary of hypocentral parameters	Australia:07/1619/45-07/29/1996 reb :06/10/1994-05/30/1998 CMR old accounts:07/16/1945-07/29/1996 RFAE: 08/29/1949-10/24/1990 NV209: 07/16/1945-09/23/1992 G+P:04/16/1945-01/30/1958 BLACKNEST: 10/03/1952-9/23/1958 CEA/DAM: 07/02/1966-7/15/1991 SULTANOV: 01/15/1965-09/06/1988 THURBER/SPOT: 01/15/1965-07/20/1985 AWE-JED:08/24/1968-11/27/1989 (FRA) AWE-JED: 06/17/1967-09/29/1988 (CHN) KHRISTOFOROV: 09/21/1955-08/22/1962 GUPTA-JED: 06/17/1967-09/25/1992 GUPTA: 10/31/1984 GUPTA+RICH: 10/16/1964 NNCKR: 01/15/1965-10/19/1989
<i>parrival</i>	table	Predicted arrivals and associations for origin-based amplitude measurements	reb :06/08/1996-05/30/1998
<i>prefer_chn</i>	view	Preferred solutions (mb and yield may be from others) for explosions by China	
<i>prefer_fra</i>	view	Preferred solutions (mb and yield may be from others) for explosions by France	
<i>prefer_gbr</i>	view	Preferred solutions (mb and yield may be from others) for explosions by Great Britain	
<i>prefer_ind</i>	view	Preferred solutions (mb and yield may be from others) for explosions by India	
<i>prefer_pak</i>	view	Preferred solutions (mb and yield may be from others) for explosions by Pakistan	
<i>prefer Sov</i>	view	Preferred solutions (mb and yield may be from others) for explosions by Soviet Union	
<i>prefer_unk</i>	view	Preferred solutions (mb and yield may be from others) for explosions by Unknown country	
<i>prefer_usa</i>	view	Preferred solutions (mb and yield may be from others) for explosions by USA	
<i>remark</i>	table	Responsible country; descriptions of events	
<i>sensor</i>	table	Calibration information for channels	reb

Table 2: Database tables/views in the explosion database.

Name	Type	Description	Data source and time period
<i>site</i>	table	Station location information	reb CMR old accounts
<i>sitechan</i>	table	Station-channel information used in <i>wfdisc</i> table	reb CMR old accounts
<i>splp</i>	table	Event characterization parameters for short-period/long-period energy ratios	reb
<i>spvar</i>	table	Variance of detrended log spectrum	reb
<i>stamag</i>	table	Station magnitude estimates	reb :05/15/1995-05/30/1998
<i>thirdmom</i>	table	Third moment of frequency	reb :05/11/1998-05/30/1998
<i>timefreq</i>	table	Time-frequency measurements for event characterization	reb
<i>wfdisc</i>	table	waveform data	CMR old accounts:12/10/1961-10/05/1993 reb :06/10/1994-05/30/1998 YES: 10/20/1976-12/04/1988 Finland: 1998 Kyrgyzstan: 1998 Australia: 1998 IRIS: 1998
<i>wftag</i>	table	waveform mapping file used in <i>wfdisc</i> table	CMR old accounts: 10/17/1976-10/05/1993 reb :06/10/1994-05/30/1998

Table 3: Data sources in the explosion database (glossary table)

Data Source	Description	GT*
AUS:APTA	Australian compiled data from American Peace Test Alerts	-
AUS:ASAR	Australian compiled data from Alice Springs seismic array	-
AUS:ASPA	Australian compiled data from Alice Springs seismic station	-
AUS:BOCH	Australian compiled data from Bocharov et al,1989 list as in Vergino,E.S.:Soviet Test Yields	-
AUS:BOLT	Australian compiled data from Bolt, B.A., 1976. Nuclear Explosions and Earthquakes. The Parted Veil. W.H.Freeman and Co, San Francisco.	-
AUS:CSS	Australian compiled data from Center for Seismic Studies, USA	-
AUS:CTAO	Australian compiled data from Charters Towers seismic station	-

Table 3: Data sources in the explosion database (*glossary table*)

Data Source	Description	GT*
AUS:DAHL	Australian compiled data from Dahlman, O. & Israelson, H., 1977. Monitoring Underground Nuclear Explosions. Elsevier, Amsterdam.	-
AUS:ENF	Australian compiled data from Inventaire des Essais Nucleaires Francais, 1994	-
AUS:FOA	Australian compiled data from Seismology (Yearly Reports), FOA Reports, Sweden	-
AUS:FUJ	Australian compiled data from Fujita, K. Peaceful Nuclear Explosions in Yakutia, Russia - Seis. Res. Letters May 1995	-
AUS:GLAS	Australian compiled data from Glasstone: The Effects of Nuclear Weapons. 1964	-
AUS:ISC	Australian compiled data from International Seismological Centre, UK	-
AUS:MISC	Australian compiled data from Miscellaneous	-
AUS:NAO	Australian compiled data from Norsar seismic array	
AUS:NRDC	Australian compiled data from Known US and USSR Nuclear Tests: July 1945 - 31 Dec 1987. Various authors and publications for Natural Resources Defense Council.	-
AUS:NZ	Australian compiled data from New Zealand	-
AUS:PDE	Australian compiled data from Preliminary Determination of Epicenters, USCGS/NOA/ERL/GS	-
AUS:PEK	Australian compiled data from Peking, China	-
AUS:PHIL	Australian compiled data from Analyses of Russian Explosions: Various authors Nov 1994 Phillips Laboratory, USAF.	-
AUS:SFIL	Australian compiled data from List supplied by Dr S.F.Ingate	-
AUS:SIXN	Australian compiled data from Six Nation Initiative, Sweden	-
AUS:SMITH	Australian compiled data from Smith,Joan: Clouds of Deceit: the deadly legacy of Britain's bomb tests. London:Faber, 1985.	-
AUS:USAEC	Australian compiled data from US Atomic Energy Commission	-
AUS:USDOE	Australian compiled data from United States Department of Energy - Summary List of Previously Unannounced Tests. Dec 1993	-
AUS:WRA	Australian compiled data from Warramunga seismic array	-
AEC	CMR compiled data from United State Atomic Energy Commission (as reported in PDE or ISC bulletins)	GT0
ANSSSR	CMR compiled data from Bulletin of the Soviet Academy of Science	-

Table 3: Data sources in the explosion database (*glossary table*)

Data Source	Description	GT*
AWE-JED	CMR compiled data from Reports of Joint Epicenter Determination at various nuclear testing sites, by the staff of the U.K. Atomic Weapons Establishment. Applicable reports are: AWE Report No. O 12/93 (China), AWE Report No. O 11/93 (France), AWE Report No. O 2/94 (Novaya Zemlya), AWE Report No. O 12/90 (Semipalatinsk).	GT2/GT5
AWRE	CMR compiled data from the U.K. Atomic Weapons Research Establishment; Procurement Executive-Ministry of Defense, Ref. AG 224.	-
BARKER	CMR compiled data from Barker, B., M. Clark, P. Davis, M. Fisk, M. Hedin, H. Israelsson, V. Khalturin, W.-Y. Kim, K. McLaughlin, C. Meade, J. Murphy, R. North, J. Orcutt, C. Powell, P. Richards, R. Stead, J. Stevens, F. Vernon, and T. Wallace, Monitoring nuclear tests, Science, 281, 1967-1968, 1999.	GT1
BCIS	CMR compiled data from Bulletin of the Bureau Central International Seismologique	-
BLACKNEST	CMR compiled data from the official list supplied by Peter Marshall, UK Atomic Weapons Research Establishment, February 1998 (email).	-
BOCHAROV	CMR compiled data from Bocharov, V.S., S.A. Selentov and V.N. Michailov, Characteristics of 92 Underground Nuclear Explosions at the Semipalatinsk Test Site, Atomnaya Energia, Vol.87, Issue 3, 1989 (in Russian)	GT0
BOLT	CMR compiled data from Bolt, Bruce A., Nuclear Explosions and Earthquakes: The Parted Veil., W.H. Freeman, 1976	-
CEA/DAM	CMR compiled data from CEA/DAM, the atolls of Mururoa and Fangataufa (french Polynesia), Part II-Nuclear testing-mechanical, lumino-thermal and electromagnetic effects.	-
D+I	CMR compiled data from Dahlman, O. and H. Israelsson, Monitoring Underground Nuclear Explosions, Elsevier Scientific Publishing Company, 1977	-
DOE	CMR compiled data from U.S. Department of Energy (as reported in PDE or ISC bulletins)	GT0
DSIR	CMR compiled data from New Zealand Department of Scientific and Industrial Research	-
ERDA	CMR compiled data from U.S. Environmental Research and Development Agency (as reported in PDE or ISC bulletins)	GT0
FOA80	CMR compiled data from Seismology 1980. Nuclear Test Ban Verification, Earthquake and Earth Resource Investigation, National Defense Institute, Stockholm, Sweden.	-
FOA82	CMR compiled data from Seismology 1982. Nuclear Test Ban Verification, Earthquake and Earth Resource Investigation, National Defense Institute, Stockholm, Sweden.	-

Table 3: Data sources in the explosion database (*glossary table*)

Data Source	Description	GT*
G+P	CMR compiled data from Griggs, D.T. and F. Press, Probing the earth with nuclear explosions, J. Geophys. Res., 61, 237-258, 1961.	GT0 GT2
G+R	CMR compiled data from Gutenberg, B. and C.F. Richter, Seismic waves from atomic bomb tests, Trans. Am. Geoph. Union, 27, 776, 1946.	
GUPTA	CMR compiled data from Gupta, V., Assessment of the Chinese nuclear test site near Lop Nor, Janes Intelligence Review, 378-381, August 1993.	GT0
GUPTA+PABIAN	CMR compiled data from Gupta, V. and F. Pabian, Investigating the allegations of Indian nuclear test preparations in the Rajasthan desert, Science and Global Security, Vol.6, no.2, 1996.	GT0
GUPTA+RICH	CMR compiled data from Gupta, V. and D. Rich, Locating the denotation point of China first nuclear explosive test on 16 October 1964, Int. J. Remote Sensing, 17, 1969-1974, 1996.	GT0
GUPTA-JED	CMR compiled data from Gupta, V., Locating nuclear explosions at the Chinese test site near Lop Nor, Science and Global Security, 5, 205-244, 1995.	GT5
GUTENBERG	CMR compiled data from Gutenberg, B., Interpretation of records obtained from the New mexico atomic bomb test, July16, 1945, Bull. Seism. Soc. Am., 36, 327, 1946.	-
IMS	CMR compiled data from Event reported from the “Intelligent Monitoring System”, Center for Seismic Studies, Arlington, VA	-
ISC	CMR compiled data from Bulletin of the International Seismological Centre, U.K.	-
ISIS	CMR compiled data from Institute for Science and International Security.	-
JHD	CMR compiled data from Joint Hypercenter Determination data used at CMR. Applicable report is Israelsson, H., M. Fisk, X. Yang, and R. North, The August 16, 1997 event in the Kara Sea, CMR Technical Report, CMR-97/38, 1997.	GT5
JOHNSON	CMR compiled data from Johnson, C.T., W.P. de la Houssaye, and T. McMillian, Hydroacoustic Signals at Long Ranges from Shot SWORDFISH, U.S. Navy Electronics Laboratory, A Bureau of Ships Laboratory, San Diego, California, NEL Report 1212 (EX), Extracted Version,1981.	-
KHALTURIN	CMR compiled data from Khalturin, V., DEGELEN/BALAPAN: UNTs and tunnels/shafts coordinates and numbers, Lamont-Doherty Earth Observatory of Columbia University (email), November 1999.	-
KHRISTOFOROV	CMR compiled data from Khristoforov, B., About the control of the under-water and above water nuclear explosions by hydroacoustic methods, Institute for Dynamics of Geosphere, Russian Academy of Sciences, Final report for the project SPC-95-4049, Moscow, October 11, 1996.	GT1

Table 3: Data sources in the explosion database (*glossary table*)

Data Source	Description	GT*
KRR	CMR compiled data from Khalturin, V., T. Rautian, and P. Richards, A study of small magnitude seismic events during 1961-1989 on and near the Semipalatinsk Test Site, Kazakhstan, Pure and Applied Geophysics, in press, 2000.	-
LRSMSRC	CMR compiled data from calculated seismic epicenter from “shot reports”, Long Range Seismic Measurement Project, U.S. Air Force Technical Applications Center	-
LRSMSRM	CMR compiled data from coordinates from AEC as reported in “shot reports”, Long Range Seismic Measurement Project, U.S. Air Force Technical Applications Center	-
MURPHY+JENAB	CMR compiled data from Murphy and Jenab, Development of a Comprehensive Seismic Yield Estimation System for Underground Nuclear Explosions, Maxwell, PL-TR-92-2076, SSS-TR-92-13129, 1992.	GT0
NEP	CMR compiled data from event reported by the “Network Event Processor”, Geotech-Alexandria Labs	-
NEWSPAPER	CMR compiled data from newspaper collections, e.g. New York Times, Washington Post.	-
NNCKR	CMR compiled data from National Nuclear Center of Kazakhstan Republic, Table of locations of Balapan nuclear explosions newly mapped by NNCKR, Calibration Workshop, 12-14 January 1999, Oslo, Norway.	GT0
NORSAR	CMR compiled data from NORSAR, Semiannual Technical Summary, 1 April - 30 September 1998, NORSAR Sci. Rep. No.1-98/99, 1998.	-
NRDC	CMR compiled data from “Nuclear Weapons Databook” or “Nuclear Weapons Databook Working Papers” by the Natural Resource Defence Council, Washington, DC. Separate databooks report on U.S., Soviet, Chinese and French nuclear tests.	-
NV209	CMR compiled data from United States nuclear tests, July 1945 through September 1992, DOE/NV-209 (Rev. 14), March 1997.	GT2 (2 event)
PDE	CMR compiled data from monthly bulletins reporting “Preliminary Determinations of Epicenters”, from the U.S. Geological Survey, National Earthquake Information Center, or from predecessor organizations in the U.S. National Oceanic and Atmospheric Administration or in the U.S. Coast and Geodetic Survey. For U.S. explosions in 1964 and later, origins attributed to PDE are, in most cases, based on data released by DOE or its predecessor agencies, AEC and ERDA.	-
PIDC_REB	CMR compiled data from PIDC Reviewed Event Bulletin, Prototype International Data Center, Center for Monitoring Research, Arlington, VA.	-
RFAE	CMR compiled data from Mikhailov, V.N. et al., USSR nuclear weapons tests and peaceful nuclear explosions, 1949 through 1990, RFNC-VNIIEF, 1996.	-

Table 3: Data sources in the explosion database (glossary table)

Data Source	Description	GT*
RICHARDS	CMR compiled data from Richards, P., Accurate estimates of the absolute location of underground nuclear tests at the northern Novaya Zemlya Test Site, Proceedings of Second Workshop on IMS Location Calibration, 10-24 March 2000, Oslo, Norway.	GT1/GT2
S+M	CMR compiled data (in <i>netmag</i> only) from Stevens, J.L. and K.L. McLaughlin, Improved methods for regionalized surface wave analysis, Final report 31 July 1995-30 July 1997, MFD-TR-97-15887, PL-TR-97-2135, Maxwell technologies-Federal Division; Phillips laboratory.	-
SPRINGER	CMR compiled data from Springer, D.L. and R.L. Kinnaman, Seismic Source Summary for U.S. Underground Nuclear Explosions, 1961-1970, Bull. Seism. Soc. Am., Vol.61, 1073-1098, 1971, and Seismic Source Summary for U.S. Underground Nuclear Explosions, 1971-1973, Bull. Seism. Soc. Am., Vol.65, 343-349, 1975.	GT0
SULTANOV	CMR compiled data from Sultanov, D.D., J.R. Murphy, and Kh.D. Rubibstein, A seismic source summary for Soviet Peaceful Nuclear Explosions, Bull. Seism. Soc. Am., 89, 1999.	GT1
TCARTER	CMR compiled data from gleaned from newspaper accounts, books, magazines etc. by T.B. Carter	-
THURBER/SPOT	CMR compiled data from Thurber, C.H., H.R. Quin, and P.G. Richards, Accurate locations of nuclear explosions in Balapan, Kazakhstan, 1987 to 1989, Geophy. Res. Lett., 20, 399-402, 1993, and Thurber, C.H., H.R. Quin, and R. Saleh, Catalog of locations of nuclear explosions at Balapan, Kazakhstan, 1965 to 1985, Bull. Seism. Soc. Am., 84, 458-461, 1994.	GT0
WWSSNSRC	CMR compiled data from calculated seismic epicenters as reported in “shot reports” of Worldwide Standard Station Seismic Measurement project, U.S. Department of Commerce, Coast and Geodetic Survey	-
WWSSNSRM	CMR compiled data from coordinates from AEC as reported in “shot reports” of Worldwide Standard Station Seismic Measurement project, U.S. Department of Commerce, Coast and Geodetic Survey	-

GT*: GT categories. GTX refers to events with location accuracy better than X km (Yang et al., 2000c).

Table 4: Test site in the explosion database (glossary table)

Test Site	Descriptions	Nominal coordinates
ALAMOGORDO	Alamogordo, New Mexico (USA)	(33.6753, -106.4747)
AMCHITKA	Amchitka Island, Alaska (USA)	(51.0000, 179.0000)
ARKHANGELSK	Arkhangelsk region, RSFSR (SOV)	(61.0000, 48.0000)
ASTRAKHAN	Astrakhan region, RSFSR (SOV)	(47.0000, 48.0000)

Table 4: Test site in the explosion database (*glossary table*)

Test Site	Descriptions	Nominal coordinates
AZGIR	Azgir, Kazakh SSR (SOV)	(48.0000, 48.0000)
BASHKIR	Bashkir ASSR, RSFSR (SOV)	(54.0000, 55.0000)
BIKINI	Bikini Atoll, Marshall Islands (USA)	(11.0000, 165.0000)
CARLSBAD	Carlsbad, New Mexico (USA)	(32.0000, -104.0000)
CENTRAL_KAZ	Central Kazakh SSR (SOV)	
CENTRAL_NEVADA	Central Nevada (USA)	(39.0000, -116.0000)
CHAGAI_HILLS	Chagai Hills, Dalbandin, Pakistan (PAK)	
CHITA	Chita region, RSFSR (SOV)	(51.000, 111.0000)
CHRISTMAS	Kiritimati (Christmas) Island, Line Islands, Pacific (USA and GBR)	(2.0000, -157.0000)
COLORADO	Colorado (USA)	
E.KAZ	STS, Eastern Kazakh SSR (SOV)	
E.KAZ:DEGELEN	Degelen, STS, Eastern Kazakh SSR (SOV)	
E.KAZ:SHAGAN	Shagan, STS, Eastern Kazakh SSR (SOV)	
EMU	Emu Field, 300 miles NW of Woomera, Australia (GBR)	
ENEWETAK	Enewetak Atoll (USA)	(11.0000, 162.0000)
FALLON,NEVADA	Fallon, Nevada (USA)	(39.0000, -118.0000)
FANGATAUFA	Fangataufa Atoll, Tuamotu Archipelago (FRA)	(-22.0000, -139.0000)
FARMINGTON	Farmington, New Mexico (USA)	(37.0000, -107.0000)
GRAND_VALLEY	Grand Valley, Colorado (USA)	(39.0000, -108.0000)
HATTIESBURG	Hattiesburg, Mississippi (USA)	(31.0000, -90.0000)
HIROSHIMA	Hiroshima, Japan (USA)	
IRKUTSK	Irkutsk region, RSFSR (SOV)	(57.0000, 107.0000)
IVANOVO	Ivanovo region, RSFSR (SOV)	(58.0000, 43.0000)
JAKUTSK	Jakutsk ASSR, RSFSR (SOV)	(63.0000, 120.0000)
JOHNSTON	Johnston Island (USA)	(17.0000, -169.0000)
KALMYK	Kalmyk ASSR, RSFSR (SOV)	(47.0000, 45.0000)
KAZAKH	Kazakh SSR (SOV)	(52.0000, 52.0000)
KEMEROVO	Kemerovo region, RSFSR (SOV)	(56.0000, 88.0000)
KOMI	Komi ASSR, RSFSR (SOV)	(67.0000, 63.0000)

Table 4: Test site in the explosion database (glossary table)

Test Site	Descriptions	Nominal coordinates
KRASNOYARSK	Krasnoyarsk territory, RSFSR (SOV)	(64.0000, 90.0000)
LOP_NOR	Lop Nor, Xinjiang Province, China (CHN)	
MANGYSHLAK	Mangyshlak, Kazakh SSR (SOV)	(44.0000, 55.0000)
MARALINGA	Maralinga, Australia (GBR)	
MARY_TURKMEN	Mary, Turkmen SSR (SOV)	(37.0000, 62.0000)
MISC	Miscellaneous - specify area in <i>remark</i>	
MISSISSIPPI	Mississippi (USA)	
MONTEBELLO	Montebello Islands, Australia (GBR)	
MTR	Missile Test Range, Kapustin Yar (SOV)	(49.0000, 46.0000)
MURMANSK	Murmansk region, RSFSR (SOV)	(68.0000, 37.0000)
MURUROA	Mururoa Atoll, Tuamotu Archipelago (FRA)	(-22.0000, -139.0000)
NAFR	Nellis Air Force Range, Nevada (USA)	(37.000, -115.0000)
NAGASAKI	Nagasaki, Japan (USA)	
NEAR_ARALSK	near Aralsk, Kazakhstan (SOV)	(46.0000, 62.0000)
NEW_MEXICO	New Mexico (USA)	
NOVAYA_ZEMLYA	Novaya Zemlya, RSFSR (SOV)	
NTS	Nevada Test Site, USA (USA and GBR)	(37.0000, -116.0000)
NTS:BUCKBOARD	Buckboard Mesa, Nevada Test Site (USA)	
NTS:CLIMAXSTOCK	Climax Stock, Nevada Test Site (USA)	
NTS:FRENCHMAN	Frenchman Flat, Nevada Test Site (USA)	
NTS:MINE_MT.	Mine Mountain, Nevada Test Site (USA)	
NTS:PAHUTE_MESA	Pahute Mesa, Nevada Test Site (USA)	
NTS:RAINIERMESA	Rainier Mesa, Nevada Test Site (USA)	
NTS:SHOSHONE_MT	Shoshone Mountain, Nevada Test Site (USA)	
NTS:YUCCA_FLAT	Yucca Flat, Nevada Test Site (USA)	
NTSNZ	Northern Test Site Novaya Zemlya, RSFSR (SOV)	(73.0000, 55.0000)
ORENBURG	Orenburg region, RSFSR (SOV)	(52.0000, 54.0000)
PACIFIC	Pacific Ocean (USA)	
PAMUK	Pamuk, Uzbek SSR (SOV)	(39.0000, 65.0000)
PERM	Perm region, RSFSR (SOV)	(57.0000, 55.0000)

Table 4: Test site in the explosion database (glossary table)

Test Site	Descriptions	Nominal coordinates
POKARAN	Pokaran, Rajasthan, India (IND)	
RIFLE	Rifle, Colorado (USA)	(40.0000, -108.0000)
SAHARA	Sahara Desert, Algeria (FRA)	
SOUTH_ATLANTIC	South Atlantic Ocean (USA)	
STS	Semipalatinsk Test Site, Kazakh SSR (SOV)	(50.0000, 78.0000)
SW_USSR	Southwestern USSR (SOV)	
TAKJTA_KUGULTA	Takhta-Kugulta, Stavropol territory, RSFSR (SOV)	(46.0000, 43.0000)
TUAMOTU	Tuamotu Archipelago (FRA) See FANGATAUFA and MURUROA.	
TYUMEN	Tyumen region, RSFSR (SOV)	(60.0000, 70.0000)
UKRAINIAN	Ukrainian SSR (SOV)	(50.0000, 35.0000)
URAL	Ural Mountains, RSFSR (SOV)	(64.0000, 55.0000)
URTA_BULAK	Urta-Bulak, Uzbek SSR (SOV)	(39.0000, 65.0000)
USSR	area specified in <i>remark</i>	
W.KAZ	Western Kazakh SSR (SOV)	
W.KAZ:AZGIR	Azgir, Western Kazakh SSR (SOV)	

Table 5: Explosion types (glossary table)

Explosion Type	descriptions
NACC	Confirmed nuclear atmospheric test by China
NACF	Confirmed nuclear atmospheric test by France: barge, aircraft, balloon
NACG	Confirmed nuclear atmospheric test by Great Britain
NACS	Confirmed nuclear atmospheric test by Soviet Union: air, space, high altitude, surface
NACU	Confirmed nuclear atmospheric test by United States: Airburst, Airdrop, Balloon, Barge, Rocket, Surface, Tower
NAPC	Presumed nuclear atmospheric test by China
NAPF	Presumed nuclear atmospheric test by France
NAPS	Presumed nuclear atmospheric test by Soviet Union
NAPU	Presumed nuclear atmospheric test by United States: Airdrop, Balloon, Barge, Rocket, Surface, Tower, Missile, Gun

Table 5: Explosion types (glossary table)

Explosion Type	descriptions
NUCF	Confirmed nuclear underground test by France
NUCI	Confirmed nuclear underground test by India
NUCI_SALVO	Confirmed nuclear underground test by India: multiple explosions
NUCP	Confirmed nuclear underground test by Pakistan
NUCP_SALVO	Confirmed nuclear underground test by Pakistan: multiple explosions
NUCS	Confirmed nuclear underground test by Soviet Union: shaft; tunnel
NUCS_SALVO	Confirmed nuclear underground test by Soviet Union: multiple explosions
NUCU	Confirmed nuclear underground test by United States: Tunnel, Shaft, Crater
NUCUG	Confirmed nuclear underground test by United States and Great Britain: Tunnel, Shaft, Crater
NUCU_SALVO	Confirmed nuclear underground test by United States: multiple explosions
NUPC	Presumed nuclear underground test by China
NUPF	Presumed nuclear underground test by France
NUPS	Presumed nuclear underground test by Soviet Union
NUPU	Presumed nuclear underground test by United States
NWCS	Confirmed nuclear under water test by Soviet Union: water surface or under water
NWCU	Confirmed nuclear under water test by United States
NWPS	Presumed nuclear under water test by Soviet Union
NWPU	Presumed nuclear under water test by United States

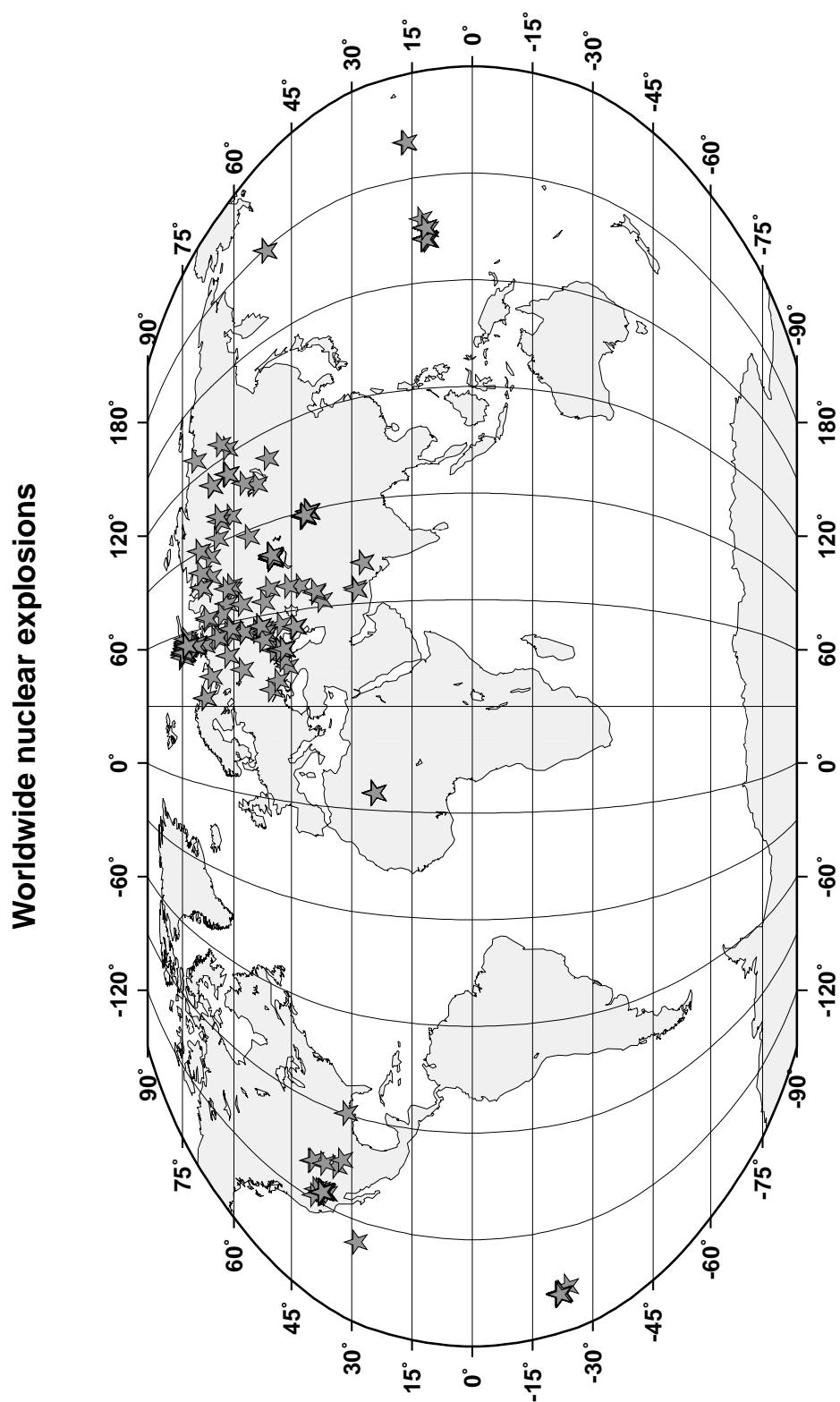


Figure 1. Preferred origins for nuclear explosions worldwide in the **explosion** database with reliable data sources.

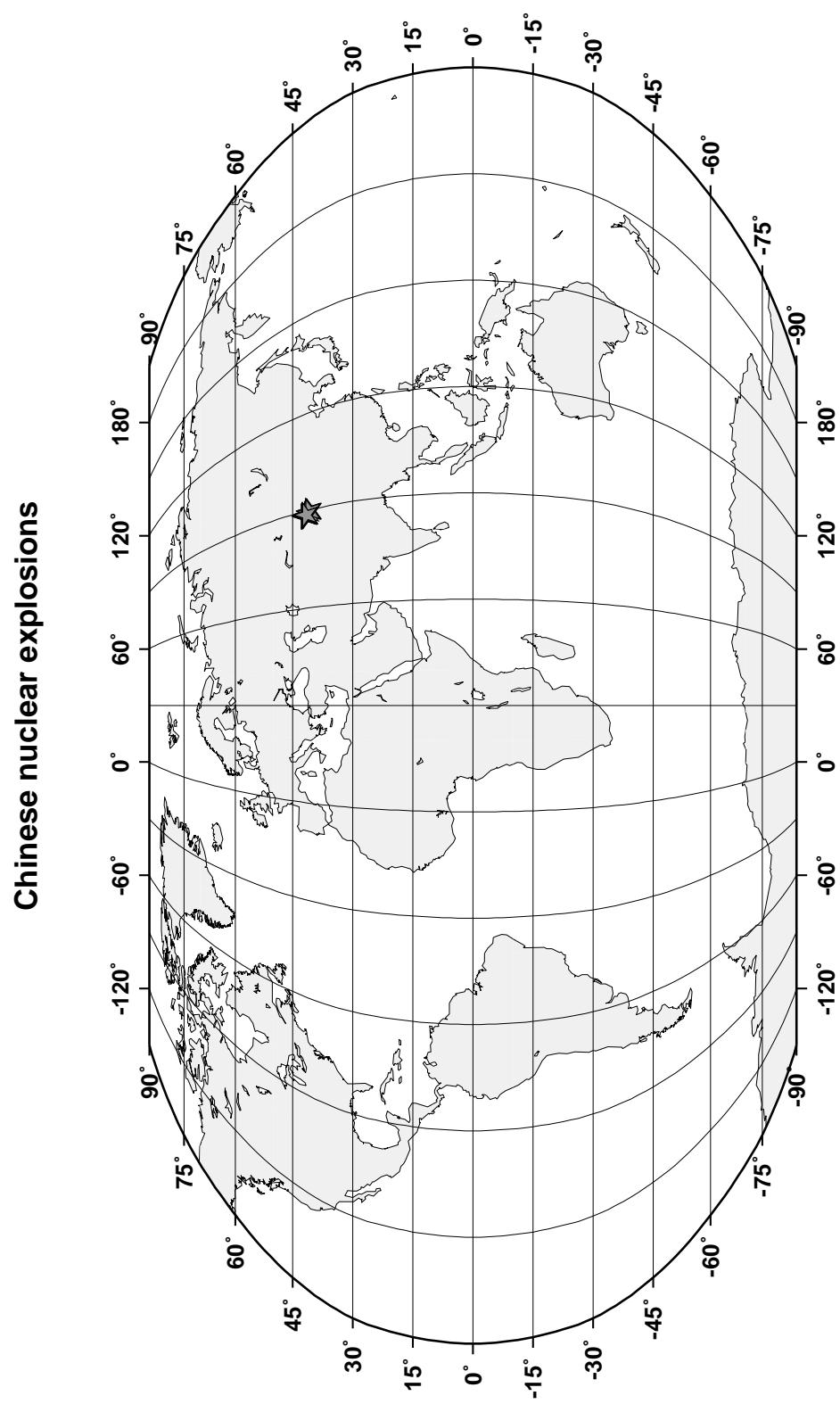


Figure 2. Preferred origins for Chinese nuclear explosions from the **explosion** database.

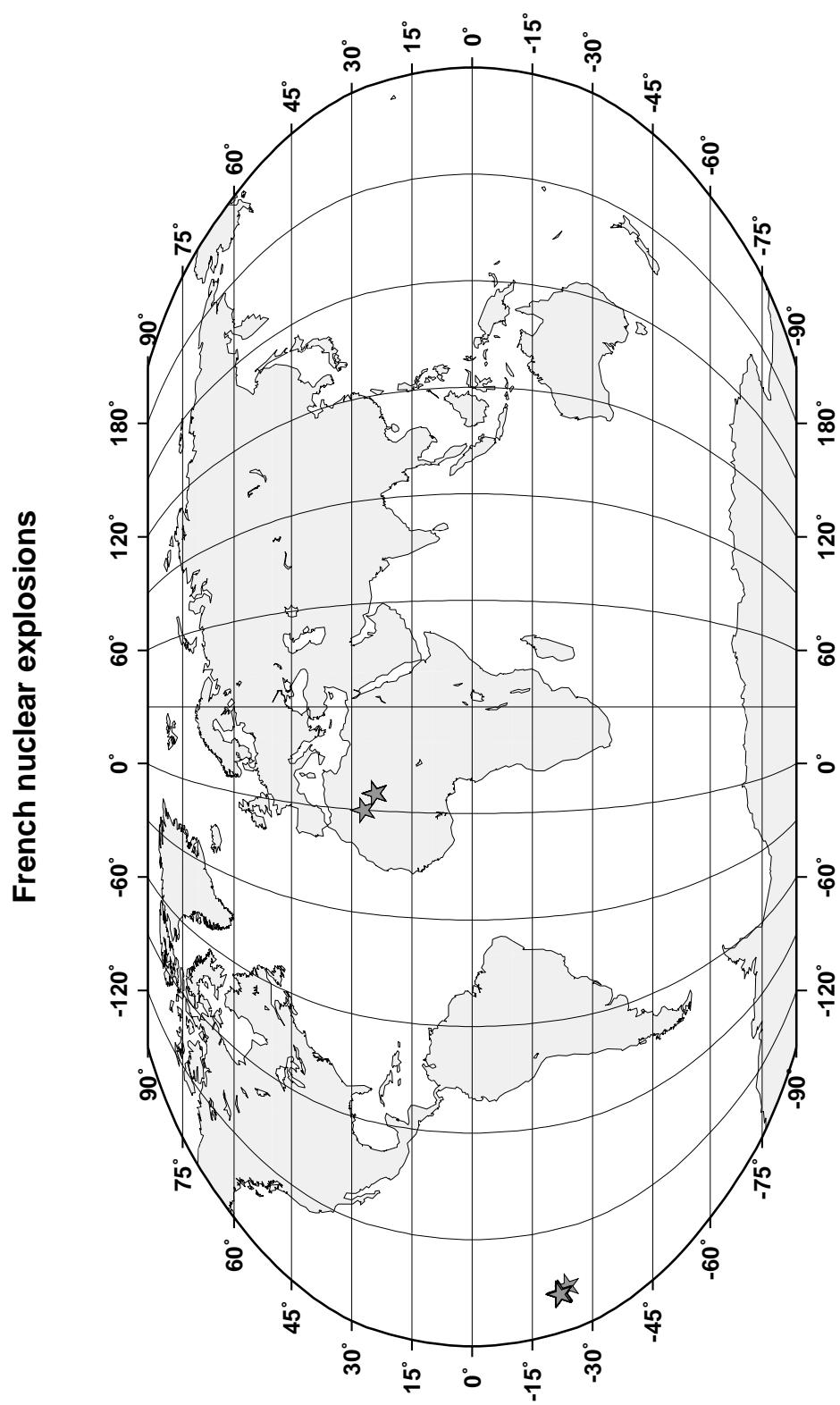


Figure 3. Preferred origins for French nuclear explosions from the **explosion** database (excluding all the default coordinates in CEA/DAM).

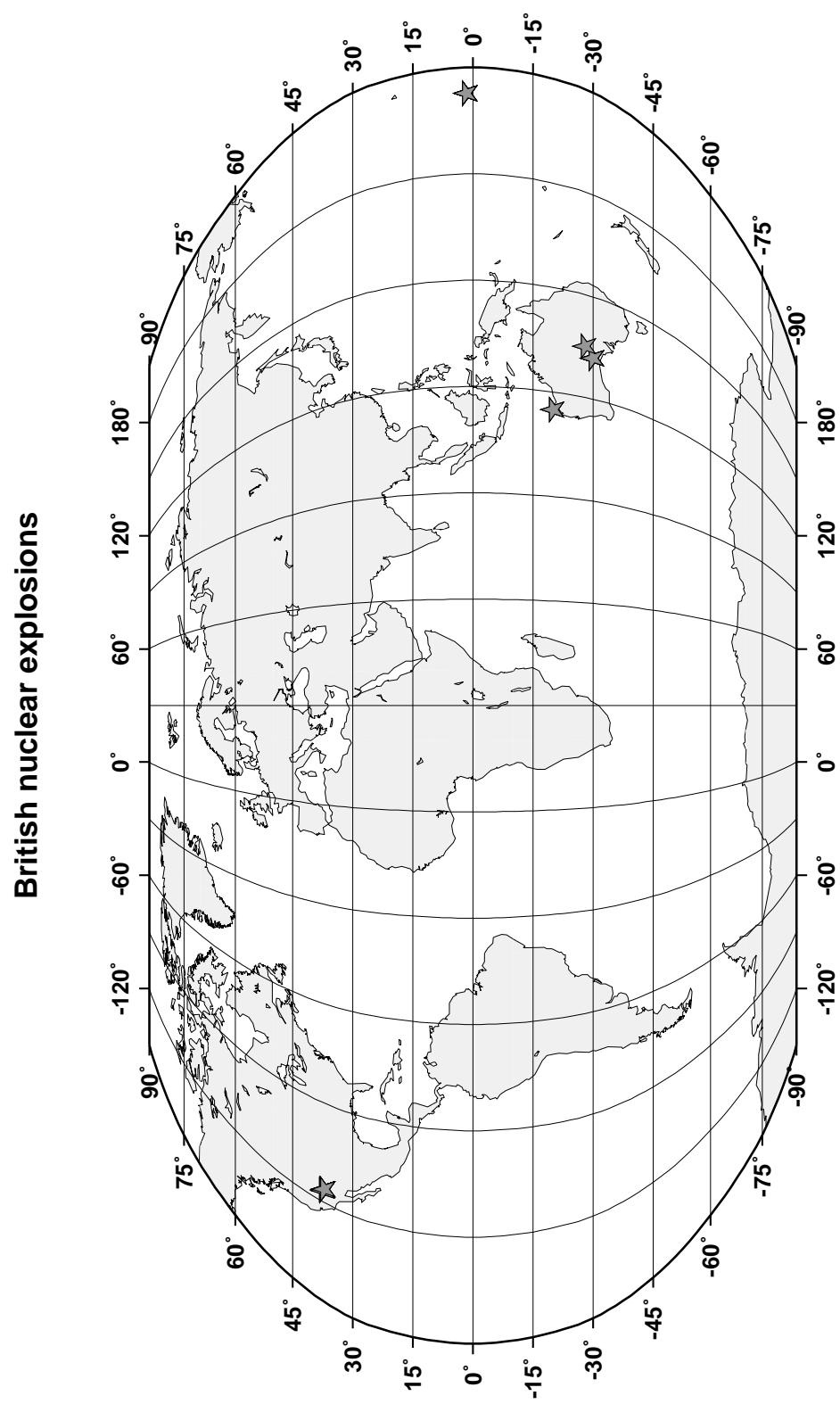


Figure 4. Preferred origins for British nuclear explosions from the **explosion** database (excluding all the default coordinates in NV209 and BLACKNEST).

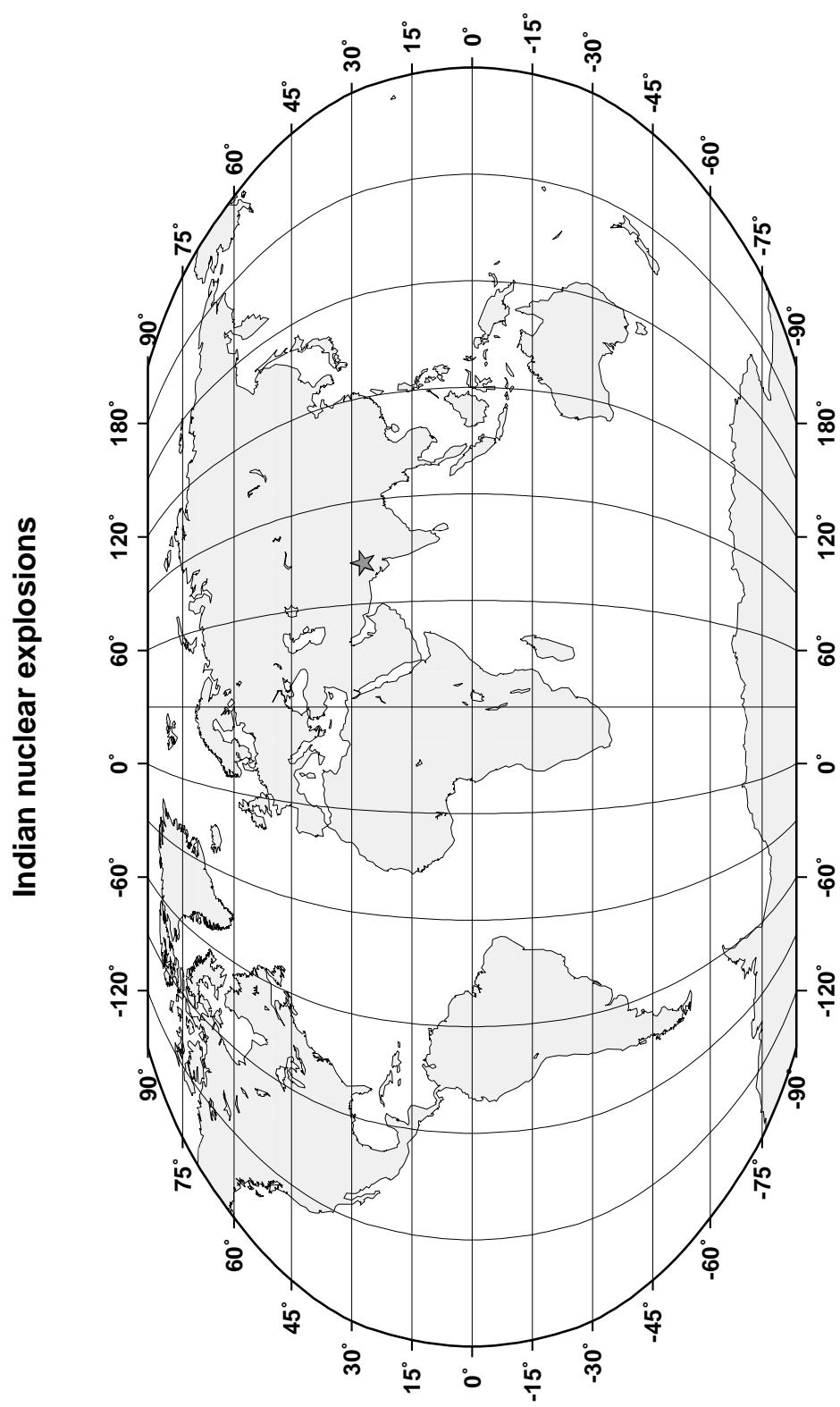


Figure 5. Preferred origins for Indian nuclear explosions from the **explosion** database.

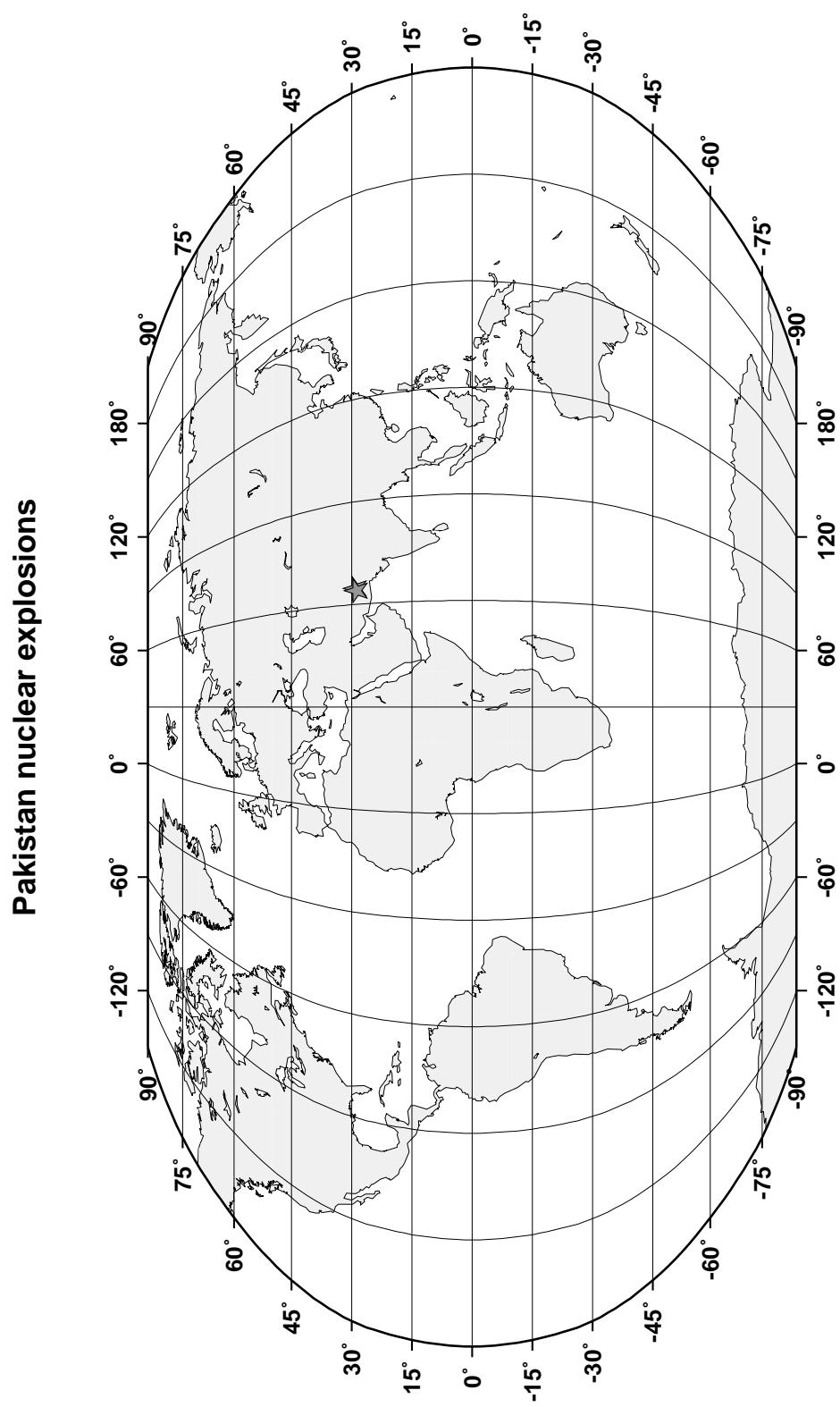


Figure 6. Preferred origins for Pakistan nuclear explosions from the **explosion** database.

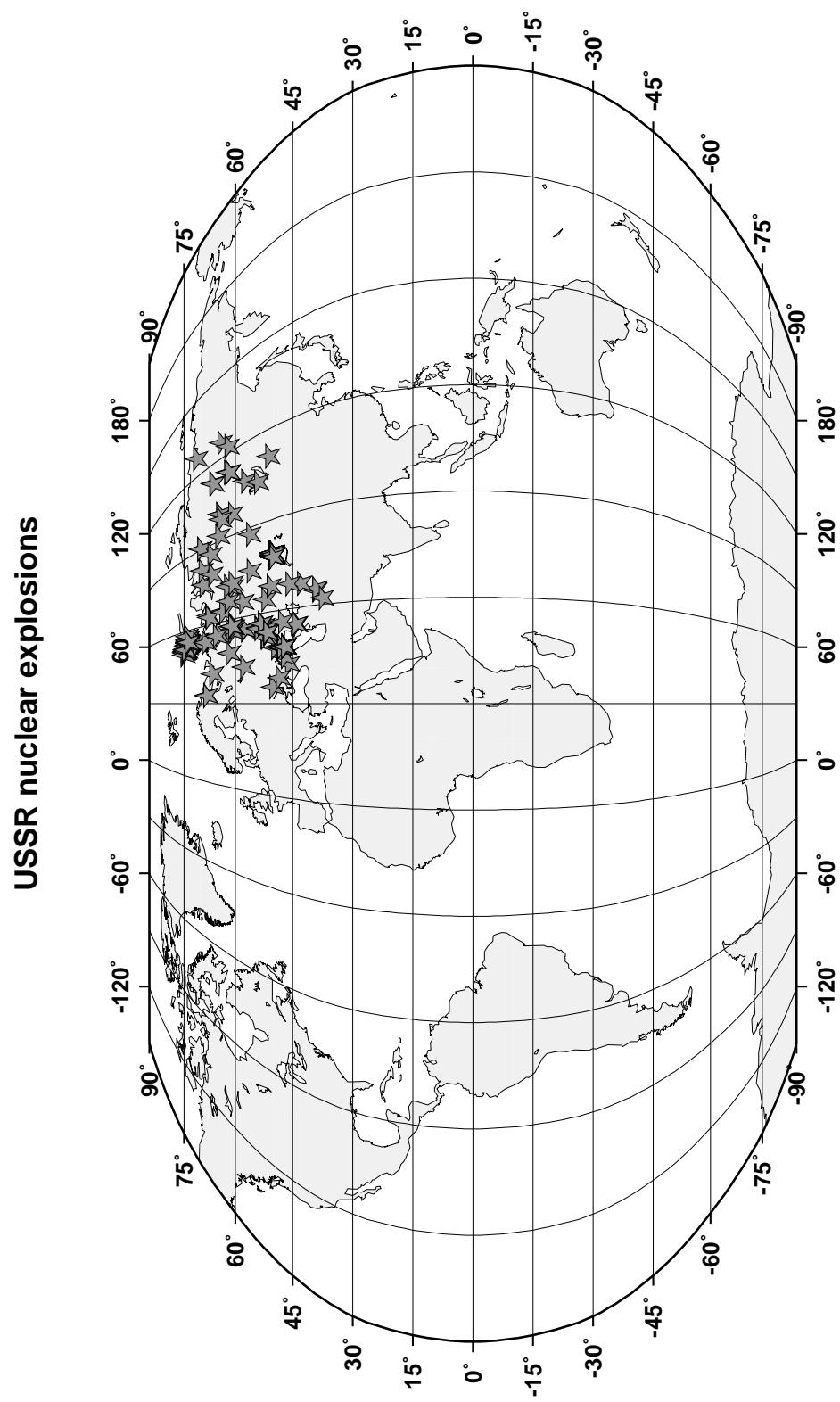


Figure 7. Preferred origins for USSR nuclear explosions from the **explosion** database (excluding all the default coordinates in RFAE).

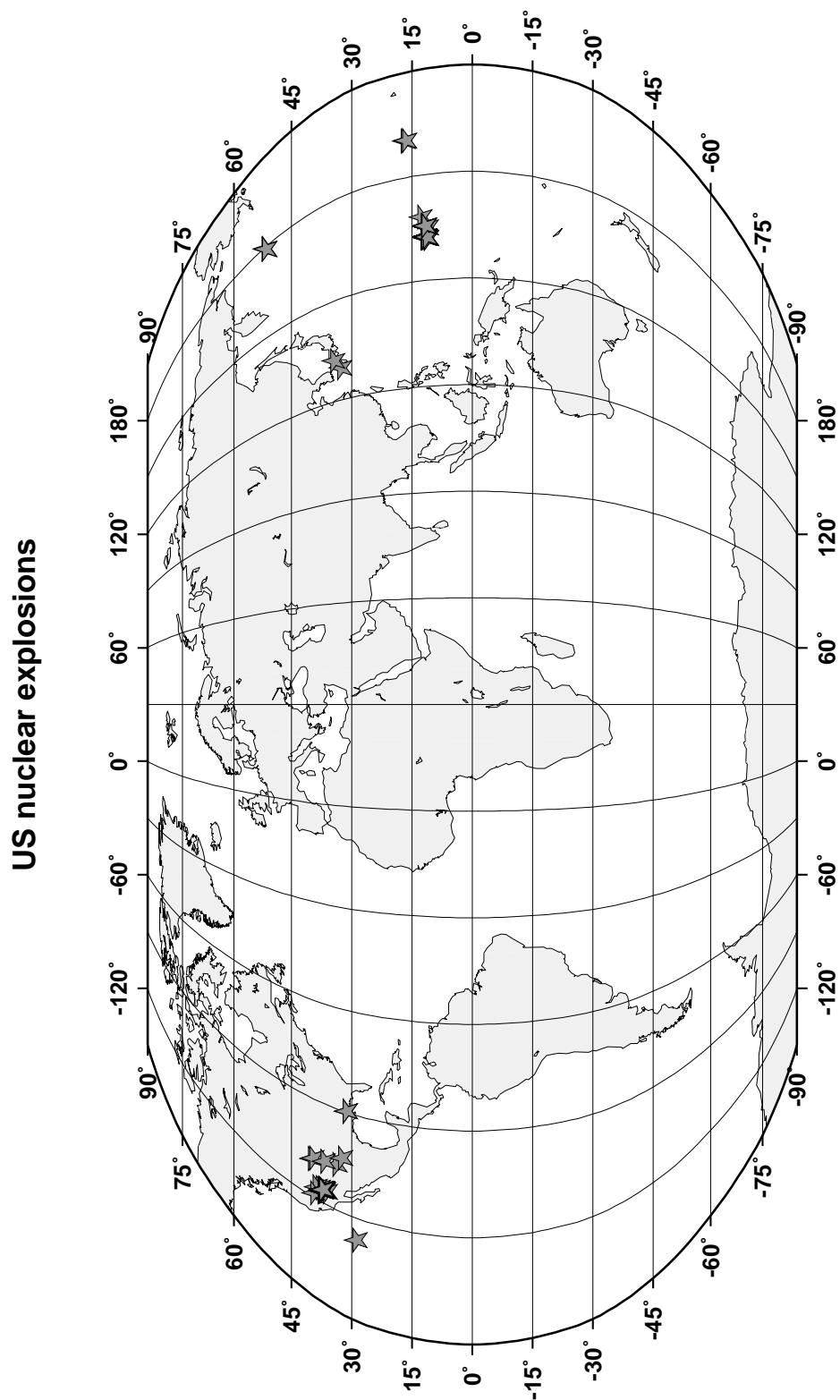


Figure 8. Preferred origins for US nuclear explosions from the **explosion** database (excluding all the default coordinates in NV209).

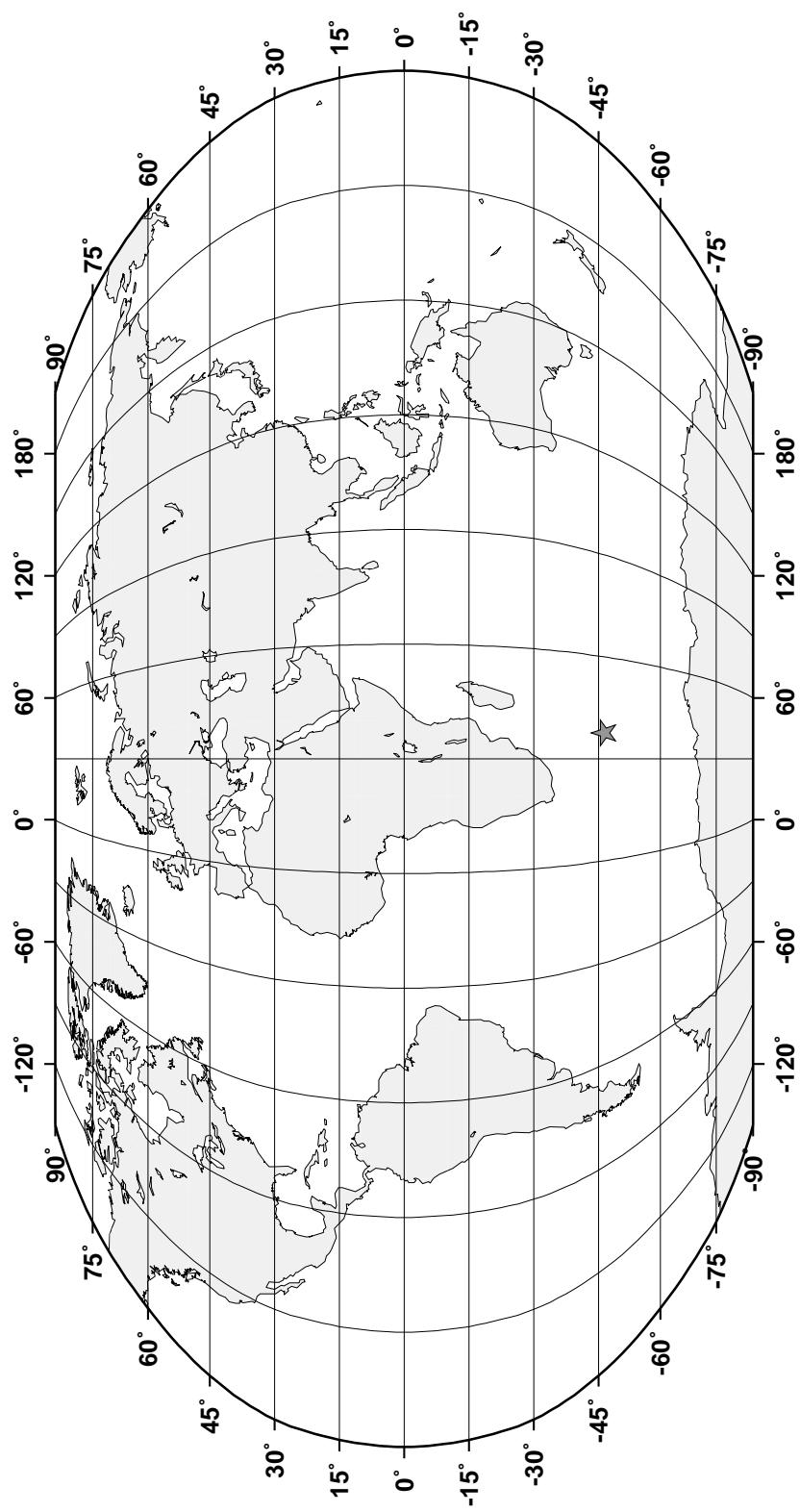
Unknown possible nuclear explosions

Figure 9. Preferred origins for the unknown possible nuclear explosion from the **explosion** database.

Appendix 1: *explo*, *glossary*, and *location* tables

In this Appendix the schema for the *explo*, *glossary*, and *location* tables is provided. These tables are not in the current schema given in the IDC Documentation, but will be included in the next revision of the schema.

For each table, table format, table attributes, and SQL script for creating the table are described. For the attributes identical to those in the schema in the IDC Documentation, descriptions are not duplicated here but they are simply noted as “Already defined in the schema”. Attributes are described in details if they are somewhat different from those already in the schema in the IDC Documentation.

1.1 *explo* table

The *explo* table is used to store explosion related parameters such as yield, medium, test site, and explosion type. This table is used in the **explosion**, **groundtruth**, and **hydroacoustic** (Yang et al., 2000b) databases.

The *explo* table was originally defined in the CSS 2.8 schema (Brennan, 1987), and later adapted into a more consistent format with the CSS 3.0 schema (Anderson et al., 1990) by Yang et al. (1997; 1998; 1999). The schema described below further incorporate information on explosion type and location description. We also ensure the attribute names are more descriptive in this revision.

1. Table format:

Relation: <i>explo</i> Description: Information on explosions					
attribute name	field no.	storage type	external format	character position	attribute description
orid	1	i4	i8	1-8	origin id
evid	2	i4	i8	10-17	event id
name	3	c32	a32	19-50	shot name
elev	4	f4	f9.4	52-60	surface elevation (km)
yield	5	f4	f9.3	62-70	yield (kt.)
yldmax	6	f4	f9.3	72-80	upper limit of yield range
medium	7	c48	a48	82-129	shot medium
moist	8	f4	f5.2	131-135	moisture content
waterdepth	9	f4	f7.4	137-143	depth of static water table (km)
paleodepth	10	f4	f7.4	145-151	depth of Paleozoic layer (km)
col_interval	11	f4	f10.0	153-162	collapse interval (second)
col_diameter	12	f4	f7.4	164-170	collapse diameter (km)
col_depth	13	f4	f7.4	172-178	collapse depth (km)
col_volume	14	f4	f10.7	180-189	collapse volume (km**3)
testsite	15	c15	a15	191-205	test site name
expcode	16	c10	a10	207-216	explosion type code

Relation:	<i>explo</i>				
Description:	Information on explosions				
exptype	17	c15	a15	218-232	explosion type
locid	18	c30	a30	234-263	location id
auth	19	c15	a15	265-279	author
commid	20	i4	i8	281-288	comment identifier
lenddate	21	date	a17	290-306	load date

2. Table attributes:

Name:	orid
Relations:	<i>explo</i>
Description:	Origin identification.
Already defined in schema	
Name:	evid
Relations:	<i>explo</i>
Description:	Event identification.
Already defined in schema	
Name:	name
Relations:	<i>explo</i>
Description:	Shot name.
ORACLE:	VARCHAR2(32)
NA value	-
Range:	Any string up to 32 characters long
Name:	elev
Relations:	<i>explo</i>
Description:	Surface elevation above shot point, geodetically measured, relative to mean sea level.
ORACLE:	FLOAT(24)
NA value	-999.0
Unites	Kilometers
Range:	-10.0 <= elev <=10.0
Name:	yield
Relations:	<i>explo</i>
Description:	Explosion yield. If yldmax is given, then yield is an estimated lower limit.
ORACLE:	FLOAT(24)
NA value	-1
Unites	kt
Range:	yield > 0.0
Name:	yldmax
Relations:	<i>explo</i>
Description:	Estimated upper limit of yield.

ORACLE:	FLOAT(24)
NA value	-1
Unites	kt
Range:	yldmax > 0.0
Name:	medium
Relations:	<i>explo</i>
Description:	Shot medium.
ORACLE:	VARCHAR2(48)
NA value	-
Range:	Any string up to 48 characters long
Name:	moist
Relations:	<i>explo</i>
Description:	Moisture content of medium at shot point. Given as a proportion to weight: X is equivalent to X*100%.
ORACLE:	FLOAT(24)
NA value	-1
Range:	moist <= 1.0
Name:	waterdepth
Relations:	<i>explo</i>
Description:	Depth of static water table level. Depth from surface zero to the piezometric surface in pre-Tertiary rocks, or to the composite piezometric surface.
ORACLE:	FLOAT(24)
NA value	-1
Unites	Kilometers
Range:	waterdepth >= 0.0
Name:	paleodepth
Relations:	<i>explo</i>
Description:	Depth to Paleozoic layer. Measured from the surface.
ORACLE:	FLOAT(24)
NA value	-1
Unites	Kilometers
Range:	paleodepth >= 0.0
Name:	col_interval
Relations:	<i>explo</i>
Description:	Collapse interval. Time interval after shot time (in seconds) of collapse.
ORACLE:	FLOAT(24)
NA value	-1
Unites	Seconds.
Range:	col_interval >= 0.0
Name:	col_diameter
Relations:	<i>explo</i>

Description:	Diameter of collapse crater.
ORACLE:	FLOAT(24)
NA value	-1
Unites	Kilometers
Range:	col_diameter >= 0.0
Name:	col_depth
Relations:	<i>explo</i>
Description:	Depth of collapse crater. Depth of the deepest point of the collapse crater relative to the original ground surface.
ORACLE:	FLOAT(24)
NA value	-1
Unites	Kilometers
Range:	col_depth >= 0.0
Name:	col_volume
Relations:	<i>explo</i>
Description:	Volume of collapse crater.
ORACLE:	FLOAT(24)
NA value	-1
Unites	km^3
Range:	col_volume >= 0.0
Name:	testsite
Relations:	<i>explo</i>
Description:	test site region.
ORACLE:	VARCHAR2(15)
NA value	-
Range:	Any string up to 15 characters long
Name:	expcode
Relations:	<i>explo</i>
Description:	Explosion type code. Four-character code indicates the type and setting of the explosion. Character 1: Type of explosion. N-nuclear.C-Chemical. Character 2: A-air; W-water; U-underground. Character 3: C-confirmed; P: presumed. Character 4: U-US; S-USSR; F-France;C-China; I-India;G-Great Britain;P-Pakistan. Five-character code: same as the four-character code except that characters 4-5 indicate the joined countries USA and GBR. Ten-character code indicates multiple shots: e.g. NUCS_SALVO. Character '-' is used for unknown in any character position.
ORACLE:	VARCHAR2(10)
Range:	Upper case string up to 10 characters long
Name:	exptype

Relations:	<i>explo</i>
Description:	Explosion type. ('Air' 'Airburst', 'Airdrop', 'Balloon', 'Barge', 'Rocket', 'Space', 'Surface', 'Tower') correspond to expcode like '_A%'. ('Tunnel', 'Shaft', 'Crater') correspond to expcode like '_U%'. ('Underwater', 'Water Surface') correspond to expcode like '_W%'.
ORACLE:	VARCHAR2(15)
Range:	Any string up to 15 characters long
Name:	locid
Relations:	<i>explo</i>
Description:	Location identification code.
ORACLE:	VARCHAR2(30)
NA Value:	-
Range:	Any string up to 30 characters long
Name:	auth
Relations:	<i>explo</i>
Description:	Author. Already defined in schema
Name:	commid
Relations:	<i>explo</i>
Description:	Comment identifier. Already defined in schema
Name:	lddate
Relations:	<i>explo</i>
Description:	Load date. Already defined in schema

3. SQL script for creating the table: explo30_cre.sql

```

rem explo30_cre.sql
rem
rem DESCRIPTION
rem This creates the explo relation for the 3.0+ database
rem definition.
rem
rem SccsID: @(#)explo30_cre.sql      05/2000
rem
accept tname prompt "Enter the tablename to have the structure of explo: "
create table &tname (
    ORID          NUMBER(8) NOT NULL,
    EVID          NUMBER(8) NOT NULL,

```

```

NAME          VARCHAR2(32),
ELEV          FLOAT(24),
YIELD          FLOAT(24),
YLDMAX        FLOAT(24),
MEDIUM        VARCHAR2(48),
MOIST          FLOAT(24),
WATERDEPTH    FLOAT(24),
PALEODEPTH    FLOAT(24),
COL_INTERVAL  FLOAT(24),
COL_DIAMETER  FLOAT(24),
COL_DEPTH     FLOAT(24),
COL_VOLUME    FLOAT(24),
TESTSITE      VARCHAR2(15),
EXPCODE       VARCHAR2(10),
EXPTYPE       VARCHAR2(15),
LOCID          VARCHAR2(30),
AUTH           VARCHAR2(15),
COMMID         NUMBER(8),
LDDATE         DATE
);

```

1.2 *glossary* table

This table is used for storing information on metadata, such as references on data sources as well as various abbreviations used in the database, e.g. explosion type in the **explosion** database. This table is used in the databases whose information comes from diverse data sources, including the **explosion**, **groundtruth**, **redb** (Reference Event Database; Yang et al., 2000d), and **hydroacoustic** (Yang et al., 2000b) databases.

1. Table format:

Relation:	<i>glossary</i>				
Description:	Information on abbreviations				
attribute name	field no.	storage type	external format	character position	attribute description
abbrev	1	c16	a16	1-16	abbreviation name
abbrevtype	2	c16	a16	18-33	abbreviation type
lineno	3	i4	i8	35-42	description line number
descrip	4	c80	a80	44-123	description
dir	5	c64	a64	125-188	directory
dfile	6	c32	a32	190-221	data file
lddate	7	date	a17	223-239	load date

2. Table attributes:

Name	abbrev
Relations:	<i>glossary</i>
Description:	Abbreviation name. This information is in the <i>origin</i> , <i>explo</i> , or <i>remark</i> tables
ORACLE:	VARCHAR2(16)
NA Value:	NOT ALLOWED
Range:	Any string up to 16 characters
Name:	abbrevtype
Relations:	<i>glossary</i>
Description:	Abbreviation type. Unique abbreviation identifier: GT category, data source, explosion type, test site.
ORACLE:	VARCHAR2(16)
NA Value:	-
Range:	Any string up to 16 characters
Name:	lineno
Relations:	<i>glossary</i>
Description:	Line number.
Already defined in schema	
Name:	descrip
Relations:	<i>glossary</i>
Description:	Description of the abbreviation.
ORACLE:	VARCHAR2(80)
NA Value:	-
Range:	Any string up to 80 characters
Name:	dir
Relations:	<i>glossary</i>
Description:	Directory of a path name for metadata
Already defined in schema	
Name:	dfile
Relations:	<i>glossary</i>
Description:	Data file name of metadata.
Already defined in schema	
Name:	lddate
Relations:	all
Description:	Load date.
Already defined in schema	

3. SQL script for creating the table: glossary30_cre.sql

```

rem FILE
rem glossary30_cre.sql
rem
rem DESCRIPTION
rem This creates the glossary relation for the 3.0+ database
rem definition.
rem
rem SccsID: @(#)glossary30_cre.sql 05/2000
rem
accept tname prompt "Enter the tablename to have the structure of glossary: "
create table &tname (
    ABBREV          VARCHAR2(16) NOT NULL,
    ABBREVTYPE      VARCHAR2(16),
    LINENO          NUMBER(8) NOT NULL,
    DESCRIPT        VARCHAR2(80),
    DIR             VARCHAR2(64),
    DFILE           VARCHAR2(32),
    LDDATE          DATE
);

```

1.3 *location* table

The *location* table is used to store information on mines and test sites. It is used in the **explosion** and **groundtruth** databases.

This table is a somewhat expansion of the *mine* table, originally defined in the CSS 3.0 schema extension (Swanger et al., 1993), and later revised for the **groundtruth** database (Yang et al., 2000c). The schema described below is useful for both mines and test sites.

1. Table format:

Relation: <i>location</i> Description: Locations of known mine sites/test sites					
attribute name	field no.	storage type	external format	character position	attribute description
locname	1	c15	a15	1-15	location name
sublocname	2	c25	a25	17-41	sub-location name
locid	3	c30	a30	43-72	location id
lat	4	f4	f9.4	74-82	latitude

Relation:	<i>location</i>				
Description:	Locations of known mine sites/test sites				
lon	5	f4	f9.4	84-92	longitude
elev	6	f4	f9.4	94-102	surface elevation (km)
edepth	7	f4	f9.4	104-112	emplacement depth
descrip	8	c50	a50	114-163	text description
auth	9	c15	a15	165-179	author
commid	10	i4	i8	181-188	comment identifier
lddate	11	date	a17	190-206	load date

2. Table attributes:

Name	locname
Relations:	<i>location</i>
Description:	Location name
ORACLE:	VARCHAR2(15)
NA Value:	-
Range:	Any string up to 15 characters
Name	sublocname
Relations:	<i>location</i>
Description:	Sub-location name
ORACLE:	VARCHAR2(25)
NA Value:	-
Range:	Any string up to 25 characters
Name:	locid
Relations:	<i>location</i>
Description:	Location identification code.
ORACLE:	VARCHAR2(30)
Range:	Any string up to 30 characters
Name:	lat
Relations:	<i>location</i>
Description:	Geographic latitude.
Already defined in schema	
Name:	lon
Relations:	<i>location</i>
Description:	Geographic longitude.
Already defined in schema	
Name:	elev
Relations:	<i>location</i>
Description:	Surface elevation of a mine/test site relative to mean sea level.
ORACLE:	FLOAT(24)

NA value	-999.0
Unites	Kilometers
Range:	-10.0 <= elev <=10.0
Name:	edepth
Relations:	<i>location</i>
Description:	Emplacement depth.
ORACLE:	FLOAT(24)
NA Value:	-999.0
Units	Kilometers
Range:	edepth >= 0.0
Name:	descrip
Relations:	<i>location</i>
Description:	Descriptive information on the location.
ORACLE:	VARCHAR2(50)
NA Value:	-
Range:	Any string up to 50 characters
Name:	auth
Relations:	<i>location</i>
Description:	Author.
Already defined in schema	
Name:	commid
Relations:	<i>location</i>
Description:	Comment identifier.
Already defined in schema	
Name:	lddate
Relations:	<i>location</i>
Description:	Load date.
Already defined in schema	

3. SQL script for creating the table: location30_cre.sql

```

rem FILE
rem location30_cre.sql
rem
rem DESCRIPTION
rem This creates the location relation for the 3.0+ database
rem definition.
rem
remSccsID: @(#)location30_cre.sql 05/2000
rem

```

```
accept tname prompt "Enter the tablename to have the structure of location: "
create table &tname (
  LOCNAME      VARCHAR2(15),
  SUBLOCNAME   VARCHAR2(25),
  LOCID        VARCHAR2(30) NOT NULL,
  LAT          FLOAT(24),
  LON          FLOAT(24),
  EDEPTH       FLOAT(24),
  ELEV         FLOAT(24),
  DESCRIPT     VARCHAR2(50),
  AUTH         VARCHAR2(15),
  COMMID       NUMBER(8),
  LDDATE       DATE
);
```

Appendix 2: Events with new NORSAR data

Events with new NORSAR data as discussed in Section 3.4 are listed below. The event parameters are the same as those in Appendix 3.

No.	jdate	date	time	latitude	longitude	depth	mb	stations
1	1971270	09/27/71	05:59:55.8	73.3930	54.9230	0.00	6.63	NOA
2	1972241	08/28/72	05:59:56.9	73.3860	54.8590	0.00	6.46	NOA
3	1973255	09/12/73	06:59:54.8	73.3160	55.0590	0.00	6.96	NOA
4	1973270	09/27/73	06:59:58.5	70.7560	53.7460	0.00	5.83	NOA
5	1973300	10/27/73	06:59:58.0	70.8010	53.9580	0.00	6.90	NOA
6	1974241	08/29/74	09:59:56.2	73.3950	54.9200	0.00	6.54	NOA
7	1974306	11/02/74	04:59:57.4	70.8330	53.8250	0.00	6.75	NOA
8	1975235	08/23/75	08:59:58.3	73.3320	54.6940	0.00	6.55	NOA
9	1975291	10/18/75	08:59:56.8	70.8380	53.6730	0.00	6.70	NOA
10	1975294	10/21/75	11:59:58.0	73.3080	55.0120	0.00	6.59	NOA
11	1976273	09/29/76	02:59:57.7	73.3600	54.8800	0.00	5.77	NOA
12	1976294	10/20/76	07:59:58.1	73.3990	54.8350	0.00	4.89	NOA
13	1977244	09/01/77	02:59:58.0	73.3390	54.6260	0.00	5.71	NOA
14	1977282	10/09/77	10:59:58.1	73.4140	54.9350	0.00	4.51	NOA
15	1978222	08/10/78	07:59:58.0	73.2930	54.8850	0.00	6.04	NOA
16	1979267	09/24/79	03:29:58.8	73.3460	54.6790	0.00	5.80	NOA
17	1979291	10/18/79	07:09:58.8	73.3180	54.8210	0.00	5.85	NOA
18	1980285	10/11/80	07:09:57.5	73.3350	54.9380	0.00	5.80	NOA
19	1981274	10/01/81	12:14:57.3	73.3080	54.8170	0.00	5.91	NOA
20	1982284	10/11/82	07:14:58.7	73.3480	54.6010	0.00	5.52	NOA
21	1983230	08/18/83	16:09:58.9	73.3580	54.9740	0.00	5.84	NOA
22	1983268	09/25/83	13:09:58.2	73.3260	54.5640	0.00	5.71	NOA
23	1984224	08/11/84	19:00:00.2	65.0500	55.1000	0.76	5.30	NOA
24	1984239	08/26/84	00:00:00.0	73.0000	55.0000	0.00		NOA
25	1984240	08/27/84	06:00:00.1	67.7500	33.0000	0.18	4.70	NOA
26	1984299	10/25/84	06:29:58.1	73.3700	54.8400	0.00	5.80	NOA
27	1985199	07/18/85	21:15:00.3	65.9940	41.0380	0.77	5.10	NOA, NRS

No.	jdate	date	time	latitude	longitude	depth	mb	stations
28	1987109	04/19/87	04:05:00.0	60.8000	57.5000	2.06	4.50	NOA, NRS
29	1987214	08/02/87	02:00:00.1	73.3500	54.5800	0.00	5.80	NOA, NRS
30	1988128	05/07/88	22:49:58.3	73.3500	54.4300	0.00	5.60	ARC, NOA, NRS
31	1988235	08/22/88	16:20:00.1	66.2800	78.4910	0.83	5.30	ARC, NOA, NRS
32	1988250	09/06/88	16:19:59.9	61.3610	48.0920	0.82	4.80	NOA, NRS
33	1988339	12/04/88	05:19:53.2	73.3800	54.9600	0.00	5.90	ARC, NOA, NRS
34	1990297	10/24/90	14:57:58.1	73.3610	54.7070	0.00	5.70	ARC, FIN, GER, NOA, NRS

NOA: NORSAR large aperture array; NRS: NORES array; ARC: ARCES array; FIN: FINES array; GER: GERES array.

Appendix 3: Event list of preferred origins

The preferred origins of all the events in the **explosion** database are listed by country in the order as shown in Table 1, France, China, Great Britain, India, Pakistan, Soviet Union, United States, and Unknown, from their corresponding views (*prefer_chn*, *prefer_fra*, *prefer_gbr*, *prefer_ind*, *prefer_pak*, *prefer Sov*, *prefer_usa*, and *prefer_unk*). The data format is jdate, time (GMT), latitude (degree), longitude (degree), depth (km; positive: downward), mb, yield (kt), maximum yield (kt), explosion code, event name, preferred author, number of solutions, number of waveform segments.

These lists combine information from several origins in the *origin*, *explo* and *wfdisc* tables. If there is no mb value for the preferred origin, the value listed is the maximum of all the origins for that event, whose mbs are obtained from networks with good azimuthal distributions (e.g. ISC, PDE). The yield information is taken from the official sources, NV209 for the US events, RFAE for the USSR events, CEA/DAM for the French events, and NV209 and BLACKNEST for the British events. When there is no official source above for an event, the yield and maximum yield are values from the preferred origin.

China

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1964290	10/16/64	07:00:00.0	41.5000	88.5000	0.00		0	20	NAPC	-	BOLT	4	0
1965134	05/14/65	02:00:00.0	41.5000	88.5000	0.00		0	20	NAPC	-	BOLT	3	0
1966129	05/09/66	08:00:00.0	41.5000	88.5000	0.00		20	200	NAPC	-	BOLT	3	0
1966300	10/27/66	01:10:00.0	41.5000	88.5000	0.00				A	-	NRDC	3	0
1966362	12/28/66	04:00:00.0	41.5000	88.5000	0.00				A	-	NRDC	3	0
1967168	06/17/67	00:19:08.2	40.7440	89.7750		4.70	3300		NAPC	-	GUPTA-JED	10	0
1967358	12/24/67	04:00:00.0	41.5000	88.5000	0.00				A	-	NRDC	3	0
1968362	12/27/68	07:30:00.0	41.5000	88.5000	0.00				A	-	BOLT	3	0
1969265	09/22/69	16:14:59.2	41.3760	88.3180		5.20	19.2		NUPC	-	GUPTA-JED	9	3
1969272	09/29/69	08:40:12.4	40.7220	89.5150		4.37	3000		NAPC	-	GUPTA-JED	8	0
1970287	10/14/70	07:29:56.9	40.5200	89.7790		4.60	3400		NAPC	-	GUPTA-JED	10	0
1971322	11/18/71	06:00:00.0	41.5000	88.5000	0.00		20		NAPC	-	BOLT	3	0
1972007	01/07/72	07:00:00.0	41.5000	88.5000	0.00				A	-	NRDC	3	0
1972078	03/18/72	06:00:00.0	41.5000	88.5000	0.00				A	-	BOLT	4	0
1973178	06/27/73	03:59:46.3	40.7985	89.8091		4.80	3000		NAPC	-	GUPTA-JED	7	0
1974168	06/17/74	05:59:52.7	40.5180	89.6190		4.50	1000		NAPC	-	GUPTA-JED	7	0
1975300	10/27/75	00:59:58.2	41.3750	88.3260		5.00	2.5		NUPC	-	GUPTA-JED	8	0
1976023	01/23/76	06:00:00.0	41.5000	88.5000	0.00				A	-	NRDC	2	31
1976270	09/26/76	06:00:00.0	41.5000	88.5000	0.00				NAPC	-	NRDC	4	0
1976291	10/17/76	04:59:58.8	41.7080	88.3700		4.90	2.6		NUPC	-	GUPTA-JED	8	31
1976322	11/17/76	06:00:12.7	40.6960	89.6270		4.70	4000		NAPC	-	GUPTA-JED	8	70
1977260	09/17/77	07:00:00.0	41.5000	88.5000	0.00				A	-	NRDC	2	0
1978074	03/15/78	05:00:00.0	41.5000	88.5000	0.00				NACC	-	NRDC	2	0
1978287	10/14/78	00:59:58.0	41.5230	88.7220		4.90	3.4		NUPC	-	GUPTA-JED	5	0
1978348	12/14/78	00:00:00.0	41.5000	88.5000	0.00				A	-	NRDC	2	4
1979256	09/13/79	00:00:00.0	41.5000	88.5000	0.00				NUPC	-	NRDC	2	0
1980290	10/16/80	04:30:29.7	40.7190	89.6510		4.44	1000		NAPC	-	GUPTA-JED	6	58
1982278	10/05/82	00:00:00.0	41.5000	88.5000	0.00				NUPC	-	NRDC	2	274
1983124	05/04/83	04:59:57.8	41.6790	88.3680		4.50	1		NUPC	-	GUPTA-JED	4	0

China

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1983279	10/06/83	10:00:00.0	41.5400	88.7200	0.00	5.47			NUPC	-	AWE-JED	7	178
1984277	10/03/84	06:00:00.0	41.5700	88.7300	0.00	5.20			NUPC	-	AWE-JED	8	1086
1984354	12/19/84	05:59:58.3	41.7370	88.4250		4.70	1.3		NUPC	-	GUPTA-JED	7	244
1987156	06/05/87	04:59:58.3	41.5180	88.7130		6.30	250		NUPC	-	GUPTA-JED	9	326
1988273	09/29/88	06:59:58.0	41.7680	88.3800		4.70	2.5		NUPC	-	GUPTA-JED	6	0
1990146	05/26/90	07:59:57.9	41.5690	88.7010		5.50	11.5		NUPC	-	GUPTA-JED	9	242
1990228	08/16/90	04:59:57.7	41.5140	88.7390		6.20	189		NUPC	-	GUPTA-JED	8	90
1992142	05/21/92	04:59:57.5	41.5130	88.7740		6.50	650		NUPC	-	GUPTA-JED	5	256
1992269	09/25/92	07:59:58.5	41.7160	88.3360		5.00	8		NUPC	-	GUPTA-JED	5	144
1993278	10/05/93	01:59:56.6	41.6670	88.6950	0.00	5.90			NUPC	-	PDE	3	708
1994161	06/10/94	06:25:57.9	41.5300	88.7100	0.00	5.80			NUPC	-	PDE	4	0
1994280	10/07/94	03:25:58.1	41.6600	88.7500	0.00	6.00			NUPC	-	PDE	4	0
1995135	05/15/95	04:05:57.8	41.6000	88.8200	0.00	6.10			NUPC	-	PDE	4	982
1995229	08/17/95	00:59:57.7	41.5600	88.8000	0.00	6.00			NUPC	-	PDE	4	1349
1996160	06/08/96	02:55:58.0	41.6600	88.6900	0.00	5.90			NUPC	-	PDE	4	1411
1996211	07/29/96	01:48:57.8	41.8200	88.4200	0.00	4.90			NUPC	-	PDE	4	1122

France

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1960044	02/13/60	07:04:00.0	27.0000	0.0000	0.00				A	gerb._bleue	BOLT	7	0
1960092	04/01/60	06:17:00.0	27.0000	0.0000	0.00				A	gerb._blanche	BOLT	7	0
1960362	12/27/60	07:30:00.0	27.0000	0.0000	0.00				A	gerb._rouge	BOLT	5	0
1961115	04/25/61	06:00:00.0	27.0000	0.0000	0.00				A	-	BOLT	4	0
1961311	11/07/61	11:29:59.9	24.0571	5.0521	0.00				U	agate	BOLT	5	0
1962121	05/01/62	10:00:00.5	24.0630	5.0418	0.00		20		U	beryl	BOLT	6	0
1963077	03/18/63	10:02:00.4	24.0413	5.0521	0.00	4.86	0	20	U	emeraude	BOLT	7	0
1963089	03/30/63	09:59:00.3	24.0433	5.0570	0.00		0	20	U	amethyste	BOLT	5	0
1963293	10/20/63	13:00:00.1	24.0355	5.0386	0.00	5.60	20		U	rubis	BOLT	7	20
1964045	02/14/64	11:00:00.3	24.0536	5.0523	0.00	4.52	0	20	U	opale	BOLT	6	10
1964167	06/15/64	13:40:00.4	24.0666	5.0345	0.00		0	20	U	topaze	BOLT	5	14
1964333	11/28/64	10:30:00.0	24.0418	5.0416	0.00		0	20	U	turquoise	BOLT	5	0
1965058	02/27/65	11:30:00.0	24.0587	5.0311	0.00	5.80	20		U	saphir	BOLT	9	13
1965150	05/30/65	11:00:00.0	24.0550	5.0508	0.00		0	20	U	jade	BOLT	5	0
1965274	10/01/65	10:00:00.0	24.0649	5.0340	0.00		0	20	U	corindon	BOLT	5	0
1965335	12/01/65	10:30:00.1	24.0437	5.0469	0.00	5.10	0	20	U	tourmaline	BOLT	9	0
1966047	02/16/66	11:00:00.0	24.0441	5.0412	0.00	4.94	0	20	U	grenat	BOLT	7	0
1966183	07/02/66	15:34:00.0	-21.8300	-138.8800	0.00			200	NACF	Aldebaron	BOLT	5	0
1966200	07/19/66	15:05:00.0	-22.2500	-138.6300	0.00			200	NACF	Tamore	BOLT	6	0
1966254	09/11/66	17:30:00.0	-21.8300	-138.8800	0.00			200	NACF	Betelgeuse	BOLT	5	0
1966267	09/24/66	17:00:00.0	-22.2500	-138.6300	0.00			200	NACF	Rigel	BOLT	5	0
1966277	10/04/66	21:00:00.0	-21.8300	-138.8800	0.00			1000	NACF	Sirius	BOLT	5	0
1967156	06/05/67	19:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Altair	BOLT	6	0
1967178	06/27/67	19:30:00.0	-21.8300	-138.8800	0.00			200	NACF	Antares	BOLT	6	0
1967183	07/02/67	17:30:00.0	-21.8300	-138.8800	0.00			200	NACF	Arcturus	BOLT	6	0
1968189	07/07/68	22:00:00.0	-21.8300	-138.8800	0.00			200	NACF	Capella	BOLT	5	0
1968197	07/15/68	19:00:00.0	-21.8300	-138.8800	0.00			1000	NACF	Castor	BOLT	5	0
1968216	08/03/68	21:00:00.0	-21.8300	-138.8800	0.00			200	NACF	Pollux	BOLT	5	0
1968237	08/24/68	18:30:00.5	-22.2280	-138.6440	0.00	4.95	1000		NACF	Canopus	AWE-JED	12	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1968252	09/08/68	19:00:01.0	-21.8210	-138.9750	0.00	4.91	1000		NACF	Procyon	AWE-JED	10	0
1970135	05/15/70	18:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Andromede	BOLT	5	0
1970142	05/22/70	18:30:00.0	-21.8300	-138.8800	0.00			1000	NACF	Cassiopee	NRDC	7	0
1970150	05/30/70	17:59:59.9	-22.3090	-138.6060	0.00	4.44		1000	NACF	Dragon	AWE-JED	11	0
1970175	06/24/70	18:30:00.0	-21.8300	-138.8800	0.00			20	NACF	Eridan	BOLT	5	0
1970184	07/03/70	18:30:00.3	-21.9350	-138.9170	0.00	4.65		1000	NACF	Licorne	AWE-JED	10	0
1970208	07/27/70	19:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Pegase	BOLT	5	0
1970214	08/02/70	19:00:00.0	-22.2500	-138.6300	0.00			200	NACF	Orion	BOLT	5	0
1970218	08/06/70	19:00:00.0	-21.8300	-138.8800	0.00			1000	NACF	Toucan	BOLT	5	0
1971156	06/05/71	19:15:00.0	-21.8300	-138.8800	0.00			200	NACF	Dione	BOLT	6	0
1971163	06/12/71	19:14:57.3	-23.8000	-137.2000	0.00			1000	NACF	Encelade	ISC	6	0
1971185	07/04/71	21:30:00.0	-21.8300	-138.8800	0.00			20	NACF	Japet	BOLT	6	0
1971220	08/08/71	18:30:00.0	-21.8300	-138.8800	0.00			20	NACF	Phoebe	BOLT	6	0
1971226	08/14/71	19:00:00.8	-21.8230	-138.9760	0.00	4.65		1000	NACF	Rhea	AWE-JED	10	0
1972177	06/25/72	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Umbriel	BOLT	5	0
1972182	06/30/72	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Titania	BOLT	5	0
1972211	07/29/72	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Oberon	BOLT	5	0
1973202	07/21/73	18:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Euterpe	D+I	4	0
1973209	07/28/73	23:03:00.0	-21.8300	-138.8800	0.00			20	NACF	Melpomene	D+I	4	0
1973231	08/19/73	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Pallas	D+I	4	0
1973237	08/25/73	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Parthenope	D+I	4	0
1973240	08/28/73	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Tamara	D+I	5	0
1974167	06/16/74	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Capricorne	D+I	4	0
1974188	07/07/74	00:00:00.0	-21.8300	-138.8800	0.00		1000	NACF	Gemeaux	D+I	4	0	
1974198	07/17/74	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Centaure	D+I	4	0
1974207	07/26/74	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Maquis	D+I	4	0
1974227	08/15/74	00:00:00.0	-21.8300	-138.8800	0.00			200	NACF	Scorpion	D+I	4	0
1974237	08/25/74	00:00:00.0	-21.8300	-138.8800	0.00			20	NACF	Taurue	D+I	4	0
1974258	09/15/74	00:00:00.0	-21.8300	-138.8800	0.00			1000	NACF	Verseau	D+I	4	0
1975156	06/05/75	18:15:00.0	-22.0000	-139.0000	0.00			5	NUCF	Achille	CEA/DAM	7	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1975330	11/26/75	00:48:00.0	-22.0000	-139.0000	0.00			20	NUCF	Hector	CEA/DAM	5	80
1976093	04/02/76	00:00:00.0	-21.8300	-138.8800	0.00			5	NUCF	Patrocle	D+I	5	0
1976193	07/11/76	00:30:00.5	-21.8630	-138.7860	0.00	4.93		20	NUCF	Menelas	AWE-JED	9	91
1976304	10/30/76	22:59:59.0	-22.0000	-139.0000	0.00			5	NUCF	Ulysse_A	CEA/DAM	2	0
1976340	12/05/76	23:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Astanax	CEA/DAM	2	0
1977050	02/19/77	23:30:00.4	-21.8400	-138.8480	0.00	5.02		20	NUCF	Ulysse_B	AWE-JED	9	81
1977078	03/19/77	23:00:59.9	-21.8870	-138.9200	0.00	5.92		150	NUCF	Nestor	AWE-JED	9	148
1977092	04/02/77	23:30:00.0	-22.0000	-139.0000	0.00			5	NUCF	Oedipe	CEA/DAM	2	0
1977187	07/06/77	23:00:00.0	-21.7830	-138.9600	0.00	4.81		20	NUCF	Ajax	AWE-JED	8	127
1977316	11/12/77	01:30:00.0	-22.0000	-139.0000	0.00			5	NUCF	Oreste	CEA/DAM	5	0
1977328	11/24/77	16:59:59.9	-21.8840	-138.8860	0.00	5.86		150	NUCF	Enee	AWE-JED	9	110
1977351	12/17/77	22:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Laocoon	CEA/DAM	5	0
1978058	02/27/78	23:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Polypheme	CEA/DAM	5	80
1978081	03/22/78	17:30:00.5	-21.7050	-138.9340	0.00	4.73		5	NUCF	Pylade	AWE-JED	9	125
1978084	03/25/78	17:30:00.0	-22.0000	-139.0000	0.00			5	NUCF	Hecube	CEA/DAM	2	0
1978182	07/01/78	17:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Xanthoisis	CEA/DAM	2	0
1978200	07/19/78	18:00:00.0	-22.0000	-139.0000	0.00			20	NUCF	Ares	CEA/DAM	5	80
1978207	07/26/78	23:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Idomenee	CEA/DAM	5	80
1978306	11/02/78	18:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Schedios	CEA/DAM	5	0
1978334	11/30/78	17:32:00.0	-21.8680	-138.9500	0.00	5.86		150	NUCF	Priam	AWE-JED	9	160
1978351	12/17/78	18:04:00.0	-22.0000	-139.0000	0.00			5	NUCF	Eteocle	CEA/DAM	5	80
1978353	12/19/78	16:57:01.5	-21.7680	-138.9340	0.00	5.01		20	NUCF	Eumee	AWE-JED	9	150
1979060	03/01/79	17:24:00.0	-22.0000	-139.0000	0.00			20	NUCF	Penthesilee	CEA/DAM	6	0
1979068	03/09/79	16:37:00.0	-22.0000	-139.0000	0.00			20	NUCF	Philoctete	CEA/DAM	5	60
1979083	03/24/79	16:28:00.4	-21.8060	-138.9330	0.00	4.93		20	NUCF	Agapenor	AWE-JED	9	137
1979094	04/04/79	18:07:00.5	-21.8500	-138.7020	0.00	4.69		20	NUCF	Polydore	AWE-JED	8	59
1979169	06/18/79	23:27:00.7	-21.8100	-138.8090	0.00	4.71		20	NUCF	Pyrrhos	AWE-JED	9	64
1979180	06/29/79	18:56:00.2	-21.8180	-138.9030	0.00	5.21		150	NUCF	Egisthe	AWE-JED	9	140
1979206	07/25/79	17:57:00.0	-21.8800	-138.9400	0.00	6.11		150	NUCF	Tydee	AWE-JED	10	125
1979209	07/28/79	19:56:00.3	-21.8090	-138.8120	0.00	4.73		5	NUCF	Palamede	AWE-JED	9	63

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1979323	11/19/79	17:53:00.0	-22.0000	-139.0000	0.00			5	NUCF	Chrysotemis	CEA/DAM	2	0
1979326	11/22/79	19:14:13.0	-22.0000	-139.0000	0.00			5	NUCF	Atree	CEA/DAM	5	60
1980054	02/23/80	18:03:00.0	-22.0000	-139.0000	0.00			5	NUCF	Thysets	CEA/DAM	6	129
1980063	03/03/80	17:56:00.0	-22.0000	-139.0000	0.00			5	NUCF	Adraste	CEA/DAM	5	80
1980083	03/23/80	19:37:00.0	-21.8610	-138.9390	0.00	5.63		150	NUCF	Thesee	AWE-JED	9	140
1980092	04/01/80	19:31:00.2	-21.8450	-138.7580	0.00	5.05		20	NUCF	Boros	AWE-JED	9	130
1980095	04/04/80	18:33:00.1	-21.9210	-138.7990	0.00	4.30		20	NUCF	Pelpos	AWE-JED	9	105
1980168	06/16/80	18:27:00.0	-21.8700	-138.8990	0.00	5.30		150	NUCF	Eurypyle	AWE-JED	9	186
1980173	06/21/80	17:01:00.0	-22.0000	-139.0000	0.00			20	NUCF	Ilus	CEA/DAM	5	136
1980188	07/06/80	17:27:00.5	-21.8490	-138.8480	0.00	4.54		20	NUCF	Chryses	AWE-JED	8	153
1980201	07/19/80	23:47:00.0	-21.8610	-138.9340	0.00	5.73		150	NUCF	Asios	AWE-JED	9	109
1980330	11/25/80	17:53:00.0	-22.0000	-139.0000	0.00			5	NUCF	Laerte	CEA/DAM	5	136
1980338	12/03/80	17:33:00.0	-21.8750	-138.9390	0.00	5.58		150	NUCF	Diomede	AWE-JED	10	119
1981058	02/27/81	23:28:00.0	-22.0000	-139.0000	0.00			5	NUCF	Broteas	CEA/DAM	5	59
1981065	03/06/81	17:27:00.0	-22.0000	-139.0000	0.00			5	NUCF	Tyro	CEA/DAM	5	145
1981087	03/28/81	17:23:00.6	-21.7900	-138.6780	0.00	4.75		20	NUCF	Iphicles	AWE-JED	8	156
1981100	04/10/81	17:57:00.5	-21.7950	-138.9460	0.00	4.76		20	NUCF	Clymene	AWE-JED	8	60
1981189	07/08/81	22:23:00.3	-21.7910	-139.0460	0.00	5.14		20	NUCF	Lyncee	AWE-JED	10	148
1981192	07/11/81	17:17:00.0	-22.0000	-139.0000	0.00			5	NUCF	Eryx	CEA/DAM	5	54
1981199	07/18/81	17:43:00.0	-22.0000	-139.0000	0.00			5	NUCF	Theras	CEA/DAM	5	65
1981215	08/03/81	18:33:00.0	-21.8240	-138.9030	0.00	5.09		150	NUCF	Agenor	AWE-JED	10	130
1981310	11/06/81	17:03:00.0	-22.0000	-139.0000	0.00			5	NUCF	Leto	CEA/DAM	2	0
1981315	11/11/81	17:07:00.2	-21.8560	-138.9540	0.00	4.71		20	NUCF	Procles	AWE-JED	10	74
1981339	12/05/81	16:58:01.1	-21.6850	-138.9330	0.00	4.68		20	NUCF	Cilix	AWE-JED	10	71
1981342	12/08/81	16:47:00.2	-21.7970	-138.9270	0.00	5.14		20	NUCF	Cadmos	AWE-JED	10	157
1982051	02/20/82	17:33:00.0	-22.0000	-139.0000	0.00			5	NUCF	Aerope	CEA/DAM	4	0
1982055	02/24/82	18:15:00.0	-22.0000	-139.0000	0.00			5	NUCF	Deiphobe	CEA/DAM	2	0
1982079	03/20/82	17:03:00.2	-21.8460	-138.8680	0.00	4.96		20	NUCF	Rhesos	AWE-JED	10	79
1982082	03/23/82	17:07:00.0	-22.0000	-139.0000	0.00			5	NUCF	Evevos	CEA/DAM	2	0
1982178	06/27/82	17:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	Laodice	CEA/DAM	5	102

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1982182	07/01/82	17:02:00.2	-21.7690	-138.9460	0.00	5.08		150	NUCF	Antilokos	AWE-JED	11	234
1982202	07/21/82	17:13:00.0	-22.0000	-139.0000	0.00			5	NUCF	Pitane	CEA/DAM	7	109
1982206	07/25/82	18:02:00.0	-21.8360	-138.8960	0.00	5.60		150	NUCF	Iaios	AWE-JED	9	111
1982231	11/27/82	17:02:00.0	-22.0000	-139.0000	0.00			5	NUCF	Procris	CEA/DAM	2	0
1983109	04/19/83	18:53:00.2	-21.8190	-138.8720	0.00	5.70		150	NUCF	Eurytos	AWE-JED	10	148
1983115	04/25/83	17:32:59.0	-22.0000	-139.0000	0.00			5	NUCF	Automedon	CEA/DAM	4	0
1983145	05/25/83	17:31:00.1	-21.8610	-138.9170	0.00	5.87		150	NUCF	Cinyras	AWE-JED	10	135
1983169	06/18/83	17:31:00.0	-22.0000	-139.0000	0.00			5	NUCF	Burisis	CEA/DAM	4	0
1983179	06/28/83	17:46:00.2	-21.7670	-138.8710	0.00	5.32		20	NUCF	Oxylos	AWE-JED	10	152
1983201	07/20/83	20:30:00.0	-22.0000	-139.0000	0.00			20	NUCF	Battos	CEA/DAM	5	0
1983216	08/04/83	17:14:00.2	-21.8350	-138.8290	0.00	5.13		150	NUCF	Carnabon	AWE-JED	10	169
1983337	12/03/83	16:58:00.0	-22.0000	-139.0000	0.00			5	NUCF	Linos	CEA/DAM	5	0
1983341	12/07/83	17:28:00.3	-21.8290	-138.9280	0.00	4.89		20	NUCF	Gyges	AWE-JED	8	0
1984129	05/08/84	17:26:00.0	-22.0000	-139.0000	0.00			5	NUCF	Demophon	CEA/DAM	5	0
1984133	05/12/84	17:31:00.0	-21.8630	-138.9010	0.00	5.57		150	NUCF	Midas	AWE-JED	9	243
1984164	06/12/84	17:16:00.0	-22.0000	-139.0000	0.00			20	NUCF	Aristee	CEA/DAM	5	0
1984168	06/16/84	17:44:00.0	-21.8490	-138.8800	0.00	5.28		150	NUCF	Echemos	AWE-JED	9	145
1984301	10/27/84	17:16:00.4	-22.0640	-138.4770	0.00	4.49		20	NUCF	Machaon	AWE-JED	8	0
1984307	11/02/84	20:45:00.1	-21.8570	-138.9200	0.00	5.64		150	NUCF	Acaste	AWE-JED	10	147
1984336	12/01/84	16:51:00.0	-22.0000	-139.0000	0.00			5	NUCF	Miletos	CEA/DAM	4	0
1984341	12/06/84	17:29:00.2	-21.8370	-138.8900	0.00	5.56		150	NUCF	Memnon	AWE-JED	10	165
1985120	04/30/85	17:29:00.6	-21.8290	-138.9520	0.00	4.51		20	NUCF	Cercyon	AWE-JED	10	228
1985128	05/08/85	20:28:00.2	-21.8310	-138.9810	0.00	5.64		150	NUCF	Nisos	AWE-JED	10	236
1985154	06/03/85	17:30:00.6	-21.8160	-138.8970	0.00	4.83		20	NUCF	Talaos	AWE-JED	10	252
1985158	06/07/85	17:40:00.0	-22.0000	-139.0000	0.00			20	NUCF	Erginos	CEA/DAM	5	0
1985297	10/24/85	17:50:00.0	-22.0000	-139.0000	0.00			5	NUCF	Hero	CEA/DAM	5	0
1985299	10/26/85	16:35:00.2	-21.8490	-138.8150	0.00	5.30		150	NUCF	Codros	AWE-JED	10	285
1985328	11/24/85	16:01:00.7	-21.8020	-138.7810	0.00	4.55		20	NUCF	Zetes	AWE-JED	10	303
1985330	11/26/85	17:42:00.1	-21.8560	-138.8990	0.00	5.76		150	NUCF	Megaree	AWE-JED	10	335
1986116	04/26/86	17:02:00.7	-21.7250	-138.9410	0.00	4.45		20	NUCF	Hyllos	AWE-JED	8	265

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1986126	05/06/86	16:58:00.0	-22.0000	-139.0000	0.00		5	NUCF	Ceto	CEA/DAM	5	0	
1986147	05/27/86	17:15:00.0	-22.0000	-139.0000	0.00		20	NUCF	Sthenelos	CEA/DAM	5	0	
1986150	05/30/86	17:25:00.1	-21.8620	-138.9490	0.00	5.58	150	NUCF	Galatee	AWE-JED	11	311	
1986314	11/10/86	16:58:00.0	-22.0000	-139.0000	0.00		5	NUCF	hesione	CEA/DAM	6	0	
1986316	11/12/86	17:02:00.3	-21.8430	-138.9270	0.00	5.28	20	NUCF	Naupolis	AWE-JED	11	159	
1986340	12/06/86	17:10:00.0	-22.0000	-139.0000	0.00		5	NUCF	Peneleos	CEA/DAM	6	0	
1986344	12/10/86	17:15:00.2	-21.8330	-138.8920	0.00	5.23	150	NUCF	Circe	AWE-JED	11	167	
1987125	05/05/87	16:58:01.3	-21.7050	-138.5810	0.00	4.55	20	NUCF	Jocaste	AWE-JED	12	220	
1987140	05/20/87	17:05:00.1	-21.8500	-138.9130	0.00	5.51	150	NUCF	Lycomede	AWE-JED	12	245	
1987157	06/06/87	18:00:00.7	-21.7690	-138.8740	0.00	4.40	20	NUCF	Dirce	AWE-JED	11	355	
1987172	06/21/87	17:55:00.1	-21.8650	-138.8910	0.00	5.10	150	NUCF	Iphritos	AWE-JED	12	273	
1987296	10/23/87	16:50:00.3	-21.8450	-138.9070	0.00	5.54	150	NUCF	Helenos	AWE-JED	12	390	
1987309	11/05/87	17:30:00.4	-21.7910	-138.8740	0.00	5.36	20	NUCF	Pasiphae	AWE-JED	12	225	
1987323	11/19/87	16:31:00.2	-21.8450	-138.9410	0.00	5.74	150	NUCF	Pelee	AWE-JED	12	143	
1987333	11/29/87	17:59:00.0	-22.0000	-139.0000	0.00		20	NUCF	Danae	CEA/DAM	7	0	
1988132	05/11/88	17:00:00.3	-21.8330	-138.9450	0.00	5.27	150	NUCF	Nelee	AWE-JED	11	179	
1988146	05/25/88	17:01:00.1	-21.8450	-138.9610	0.00	5.50	150	NUCF	Niobe	AWE-JED	11	135	
1988168	06/16/88	17:15:00.0	-21.7500	-139.0000	0.00	4.80	5	NUCF	Antigone	TCARTER	7	78	
1988175	06/23/88	17:31:00.3	-21.8460	-138.9110	0.00	5.18	20	NUCF	Dejanire	AWE-JED	11	120	
1988299	10/25/88	17:00:00.0	-22.0000	-139.0000	0.00		5	NUCF	Acrisios	CEA/DAM	4	0	
1988310	11/05/88	16:30:00.4	-21.7930	-138.9870	0.00	5.30	150	NUCF	Thrasymedes	AWE-JED	12	63	
1988328	11/23/88	17:01:00.3	-21.8350	-138.9540	0.00	5.29	150	NUCF	Pheres	AWE-JED	11	96	
1988335	11/30/88	17:55:00.0	-22.2330	-138.7400	0.00	5.58	150	NUCF	Cynos	AWE-JED	13	186	
1989131	05/11/89	16:45:00.5	-21.8120	-138.8840	0.00	5.16	20	NUCF	Epeios	AWE-JED	10	36	
1989140	05/20/89	17:59:00.0	-22.0000	-139.0000	0.00		5	NUCF	Tecmessaa	CEA/DAM	5	0	
1989154	06/03/89	17:30:00.2	-21.8420	-138.9220	0.00	5.16	150	NUCF	Nyctee	AWE-JED	10	42	
1989161	06/10/89	17:30:00.1	-22.2170	-138.7210	0.00	5.52	150	NUCF	Cyzicos	AWE-JED	12	54	
1989297	10/24/89	16:30:00.2	-21.8520	-138.9120	0.00	5.37	150	NUCF	Hypsipyle	AWE-JED	11	48	
1989304	10/31/89	16:57:00.3	-21.7930	-138.8550	0.00	5.30	20	NUCF	Erigone	AWE-JED	9	96	
1989324	11/20/89	17:29:00.3	-21.7930	-138.8840	0.00	5.19	20	NUCF	Tros	AWE-JED	10	69	

France

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1989331	11/27/89	17:00:00.0	-22.2510	-138.7220	0.00	5.59		150	NUCF	Lycos	AWE-JED	12	75
1990153	06/02/90	17:29:58.5	-21.8770	-138.9180	0.00	5.30		20	NUCF	Telephe	PDE	8	228
1990158	06/07/90	17:30:00.0	-22.0000	-139.0000	0.00	4.65		20	NUCF	Megapentes	DSIR	6	0
1990177	06/26/90	17:59:58.2	-22.2150	-138.8410	0.00	5.50		150	NUCF	Cypselos	PDE	10	126
1990185	07/04/90	17:59:58.6	-21.8500	-139.0420	0.00	5.10		20	NUCF	Anticlee	PDE	7	242
1990318	11/14/90	18:11:58.0	-22.2580	-138.8050	0.00	5.50		150	NUCF	Hyrtacos	PDE	8	647
1990325	11/21/90	16:59:58.1	-21.9360	-138.9670	0.00	5.40		150	NUCF	Thoas	PDE	8	223
1991127	05/07/91	17:00:00.0	-22.0000	-139.0000	0.00			5	NUCF	MElanippe	IMS	6	0
1991138	05/18/91	17:14:58.5	-21.8320	-139.0140	0.00	5.10		150	NUCF	Alcinos	PDE	6	18
1991149	05/29/91	18:59:58.2	-22.2560	-138.7940	0.00	5.50		150	NUCF	Periclymentos	PDE	8	0
1991165	06/14/91	17:59:57.8	-21.9440	-138.9880	0.00	5.20		150	NUCF	Pitthee	PDE	7	0
1991186	07/05/91	18:00:00.0	-22.0000	-139.0000	0.00	3.80		5	NUCF	Coronis	DSIR	6	0
1991196	07/15/91	18:09:58.3	-21.8770	-138.9630	0.00	5.30		150	NUCF	Lycurgue	PDE	8	0
1995248	09/05/95	21:29:58.4	-21.8500	-138.8400	0.00	4.80			NUPF	-	PDE	4	716
1995274	10/01/95	23:29:58.0	-22.2500	-138.7400	0.00	5.40			NUPF	-	PDE	4	1330
1995300	10/27/95	21:59:58.2	-21.8900	-138.9800	0.00	5.40			NUPF	-	PDE	4	711
1995325	11/21/95	21:29:58.1	-21.8800	-139.0300	0.00	4.80			NUPF	-	PDE	4	971
1995361	12/27/95	21:29:58.0	-21.8800	-138.9700	0.00	5.10			NUPF	-	PDE	4	808
1996027	01/27/96	21:29:57.8	-22.2400	-138.8200	0.00	5.30			NUPF	-	PDE	4	1053

Great Britain

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1952277	10/03/52	00:00:00.0	-20.0000	115.0000	0.00		25		NACG	Hurricane	BOLT	5	0
1953287	10/14/53	22:30:00.0	-28.0000	135.0000	0.00		10		NACG	Totem 1	BOLT	5	0
1953299	10/26/53	22:30:00.0	-28.0000	135.0000	0.00		8		NACG	Totem 2	BOLT	5	0
1956137	05/16/56	00:00:00.0	-20.0000	115.0000	0.00		15		NACG	Mosaic G1	BOLT	5	0
1956171	06/19/56	00:00:00.0	-20.0000	115.0000	0.00		60		NACG	Mosaic G2	BOLT	5	0
1956271	09/27/56	00:00:00.0	-30.0000	132.0000	0.00		15		NACG	Buffalo	BOLT	5	0
1956278	10/04/56	00:00:00.0	-30.0000	132.0000	0.00		1.5		NACG	Buffalo	BOLT	5	0
1956285	10/11/56	00:00:00.0	-30.0000	132.0000	0.00		3		NACG	Buffalo	BOLT	5	0
1956296	10/22/56	00:00:00.0	-30.0000	132.0000	0.00		10		NACG	Buffalo	BOLT	5	0
1957135	05/15/57	19:37:00.0	1.6700	-157.2500	0.00				A	grapple	BOLT	3	0
1957151	05/31/57	19:41:00.0	1.6700	-157.2500	0.00				A	grapple	BOLT	3	0
1957170	06/19/57	19:40:00.0	1.6700	-157.2500	0.00				A	grapple	BOLT	3	0
1957257	09/14/57	05:30:00.0	-30.0000	132.0000	0.00		1		NACG	Antler	BOLT	5	0
1957268	09/25/57	00:30:00.0	-30.0000	132.0000	0.00		6		NACG	Antler	BOLT	5	0
1957282	10/09/57	07:30:00.0	-30.0000	132.0000	0.00		25		NACG	Antler	BOLT	5	0
1957312	11/08/57	17:47:00.0	1.6700	-157.2500	0.00		1800		NACG	grapple	BOLT	4	0
1958118	04/28/58	19:05:00.0	1.6700	-157.2500	0.00		3000		NACG	grapple	BOLT	4	0
1958234	08/22/58	18:00:00.0	1.6700	-157.2500	0.00		24		NACG	grapple	BOLT	4	0
1958245	09/02/58	17:24:00.0	1.6700	-157.2500	0.00		1000		NACG	grapple	BOLT	4	0
1958254	09/11/58	17:48:00.0	1.6700	-157.2500	0.00		800		NACG	grapple	BOLT	4	0
1958266	09/23/58	17:58:00.0	1.6700	-157.2500	0.00		25		NACG	grapple	BOLT	4	0
1962060	03/01/62	19:10:00.1	37.0413	-116.0287	0.36		9.5		NUCUG	Pampas	SPRINGER	6	0
1962341	12/07/62	19:00:00.1	37.0518	-116.0293	0.30			20	NUCUG	Tendrac	SPRINGER	6	0
1964199	07/17/64	17:18:30.0	37.0176	-116.0296	0.27			20	NUCUG	Cormorant	SPRINGER	5	0
1964269	09/25/64	00:00:00.0	37.0000	-116.0000	0.00		0	0	NUCUG	Courser	NV209	2	0
1965253	09/10/65	17:12:00.0	37.0780	-116.0167	0.46	5.16	20	200	NUCUG	Charcoal	SPRINGER	10	0
1974143	05/23/74	13:38:30.2	37.1245	-116.0789	0.47	4.80	20	200	NUCUG	Fallon	ERDA	8	0
1976239	08/26/76	14:30:00.2	37.1250	-116.0820	0.54	5.30	20	150	NUCUG	Banon	ERDA	8	27
1978101	04/11/78	17:45:00.1	37.2335	-116.3685	0.67	5.50	20	150	NUCUG	Fondutta	DOE	9	244

Great Britain

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1978322	11/18/78	19:00:00.2	37.1269	-116.0839	0.54	5.10	20	150	NUCUG	Quargel	DOE	8	128
1979241	08/29/79	15:08:00.2	37.1212	-116.0666	0.46	4.80	20	150	NUCUG	Nessel	DOE	8	57
1980117	04/26/80	17:00:00.1	37.2484	-116.4224	0.63	5.50	20	150	NUCUG	Colwick	DOE	8	103
1980298	10/24/80	19:15:00.1	37.0746	-115.9993	0.43	4.70		20	NUCUG	Dutchess	DOE	8	56
1980352	12/17/80	15:10:00.1	37.3248	-116.3117	0.57	5.10	20	150	NUCUG	Serpa	DOE	8	79
1981316	11/12/81	15:00:00.1	37.1082	-116.0490	0.52	5.40	20	150	NUCUG	Rousanne	DOE	8	75
1982115	04/25/82	18:05:00.1	37.2558	-116.4224	0.57	5.40	20	150	NUCUG	Gibne	DOE	8	106
1983112	04/22/83	13:53:00.1	37.1115	-116.0224	0.00	4.00		20	NUCUG	Armada	DOE	8	121
1984122	05/01/84	19:05:00.1	37.1062	-116.0224	0.00	5.40	20	150	NUCUG	Mundo	DOE	8	277
1984344	12/09/84	19:40:00.1	37.2701	-116.4976	0.00	5.50	20	150	NUCUG	Egmont	DOE	8	181
1985339	12/05/85	15:00:00.1	37.0533	-116.0454	0.00	5.70	20	150	NUCUG	Kinibito	DOE	8	265
1986176	06/25/86	00:00:00.0	37.2646	-116.4993	0.00	5.60	20	150	NUCUG	Darwin	DOE	7	242
1987197	07/16/87	19:00:00.1	37.1036	-116.0234	0.00	4.90	20	150	NUCUG	Midland	DOE	8	260
1989342	12/08/89	15:00:00.1	37.2311	-116.4094	0.00	5.50	20	150	NUCUG	Barnwell	DOE	9	42
1990318	11/14/90	19:17:00.7	37.2274	-116.3712	0.00	5.40	20	150	NUCUG	Houston	DOE	8	740
1991330	11/26/91	18:35:00.1	37.0965	-116.0696	0.00	4.60		20	NUCUG	Bristol	DOE	6	0

India

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1974138	05/18/74	02:34:55.0	27.0950	71.7520	0.11	5.00	12		NUCI	-	GUPTA+PABIAN	7	60
1998131	05/11/98	10:13:41.8	27.1000	71.8000	0.00	5.20			NUCI_SALVO	Shakti-1	PDE	6	1349
1998133	05/13/98	00:00:00.0			0.00		.6		NUCI_SALVO	Shakti-4	NEWSPAPER	2	0

Pakistan

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1998148	05/28/98	10:16:15.2	28.9000	64.7900	0.00	4.80			NUCP_SALVO	-	PDE	9	1570
1998150	05/30/98	06:54:54.9	28.4900	63.7300	0.00	4.60			NUCP	-	PDE	3	1264

Soviet Union

jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1949241	08/29/49	00:00:00.0	50.0000	78.0000	0.00		22		NACS	joe1	RFAE	4	0
1951267	09/24/51	00:00:00.0	50.0000	78.0000	0.00		38		NACS	joe2	RFAE	4	0
1951291	10/18/51	00:00:00.0	50.0000	78.0000	0.00		42		NACS	joe3	RFAE	4	0
1953224	08/12/53	00:00:00.0	50.0000	78.0000	0.00		400		NACS	joe4_1st_therm	RFAE	4	0
1953235	08/23/53	00:00:00.0	50.0000	78.0000	0.00		28		NACS	-	RFAE	4	0
1953246	09/03/53	00:00:00.0	50.0000	78.0000	0.00		5.8		NACS	-	RFAE	1	0
1953251	09/08/53	00:00:00.0	50.0000	78.0000	0.00		1.6		NACS	-	RFAE	1	0
1953253	09/10/53	00:00:00.0	50.0000	78.0000	0.00		4.9		NACS	-	RFAE	1	0
1954257	09/14/54	00:00:00.0	64.0000	55.0000	0.00		40		NACS	-	RFAE	4	0
1954272	09/29/54	00:00:00.0	50.0000	78.0000	0.00		.2		NACS	-	RFAE	1	0
1954274	10/01/54	00:00:00.0	50.0000	78.0000	0.00		.03		NACS	-	RFAE	1	0
1954276	10/03/54	00:00:00.0	50.0000	78.0000	0.00		2		NACS	-	RFAE	1	0
1954278	10/05/54	00:00:00.0	50.0000	78.0000	0.00		4		NACS	-	RFAE	1	0
1954281	10/08/54	00:00:00.0	50.0000	78.0000	0.00		.8		NACS	-	RFAE	1	0
1954292	10/19/54	00:00:00.0	50.0000	78.0000	0.00		0	.001	NACS	-	RFAE	1	0
1954296	10/23/54	00:00:00.0	50.0000	78.0000	0.00		62		NACS	-	RFAE	1	0
1954299	10/26/54	00:00:00.0	50.0000	78.0000	0.00		2.8		NACS	-	RFAE	2	0
1954303	10/30/54	00:00:00.0	50.0000	78.0000	0.00		10		NACS	-	RFAE	1	0
1955210	07/29/55	00:00:00.0	50.0000	78.0000	0.00		1.3		NACS	-	RFAE	3	0
1955214	08/02/55	00:00:00.0	50.0000	78.0000	0.00		12		NACS	-	RFAE	4	0
1955217	08/05/55	00:00:00.0	50.0000	78.0000	0.00		1.2		NACS	-	RFAE	1	0
1955264	09/21/55	00:00:00.0	70.7000	54.5600	0.01		3.5		NWCS	-	KHRISTOFOROV	5	0
1955310	11/06/55	00:00:00.0	50.0000	78.0000	0.00		250		NACS	-	RFAE	4	0
1955326	11/22/55	00:00:00.0	50.0000	78.0000	0.00		1600		NACS	-	RFAE	4	0
1956033	02/02/56	00:00:00.0	46.0000	62.0000	0.00		.3		NACS	-	RFAE	1	0
1956076	03/16/56	00:00:00.0	50.0000	78.0000	0.00		14		NACS	-	RFAE	1	0
1956085	03/25/56	00:00:00.0	50.0000	78.0000	0.00		5.5		NACS	-	RFAE	1	0
1956237	08/24/56	00:00:00.0	50.0000	78.0000	0.00		27		NACS	-	RFAE	4	0
1956243	08/30/56	00:00:00.0	50.0000	78.0000	0.00		900		NACS	-	RFAE	4	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1956246	09/02/56	00:00:00.0	50.0000	78.0000	0.00		51		NACS	-	RFAE	4	0
1956254	09/10/56	00:00:00.0	50.0000	78.0000	0.00		38		NACS	-	RFAE	4	0
1956322	11/17/56	00:00:00.0	50.0000	78.0000	0.00		900		NACS	-	RFAE	4	0
1956349	12/14/56	00:00:00.0	50.0000	78.0000	0.00		40		NACS	-	RFAE	1	0
1957019	01/19/57	00:00:00.0	49.0000	46.0000	0.00		10		NACS	-	RFAE	4	0
1957067	03/08/57	00:00:00.0	50.0000	78.0000	0.00		19		NACS	-	RFAE	4	0
1957093	04/03/57	00:00:00.0	50.0000	78.0000	0.00		42		NACS	-	RFAE	4	0
1957096	04/06/57	00:00:00.0	50.0000	78.0000	0.00		57		NACS	-	RFAE	4	0
1957100	04/10/57	00:00:00.0	50.0000	78.0000	0.00		680		NACS	-	RFAE	4	0
1957102	04/12/57	00:00:00.0	50.0000	78.0000	0.00		22		NACS	-	RFAE	4	0
1957106	04/16/57	00:00:00.0	50.0000	78.0000	0.00		320		NACS	-	RFAE	4	0
1957234	08/22/57	00:00:00.0	50.0000	78.0000	0.00		520		NACS	-	RFAE	4	0
1957238	08/26/57	00:00:00.0	50.0000	78.0000	0.00		.1		NACS	-	RFAE	1	0
1957250	09/07/57	08:00:01.0	70.6900	54.8000	0.00		32		NACS	-	KHRISTOFOROV	2	0
1957256	09/13/57	00:00:00.0	50.0000	78.0000	0.00		5.9		NACS	-	RFAE	1	0
1957267	09/24/57	00:00:00.0	73.0000	55.0000	0.00		1600		NACS	-	RFAE	4	0
1957269	09/26/57	00:00:00.0	50.0000	78.0000	0.00		13		NACS	-	RFAE	3	0
1957279	10/06/57	00:00:00.0	73.0000	55.0000	0.00		2900		NACS	-	RFAE	4	0
1957283	10/10/57	00:00:00.0	70.7000	54.5600	0.03		10		NWCS	-	KHRISTOFOROV	5	0
1957362	12/28/57	00:00:00.0	50.0000	78.0000	0.00		12		NACS	-	RFAE	4	0
1958004	01/04/58	00:00:00.0	50.0000	78.0000	0.00		1.3		NACS	-	RFAE	1	0
1958017	01/17/58	00:00:00.0	50.0000	78.0000	0.00		.5		NACS	-	RFAE	1	0
1958054	02/23/58	00:00:00.0	73.0000	55.0000	0.00		860		NACS	-	RFAE	4	0
1958058	02/27/58	00:00:00.0	73.0000	55.0000	0.00		250		NACS	-	RFAE	4	0
1958058	02/27/58	00:00:00.0	73.0000	55.0000	0.00		1500		NACS	-	RFAE	4	0
1958072	03/13/58	00:00:00.0	50.0000	78.0000	0.00		1.2		NACS	-	RFAE	1	0
1958073	03/14/58	00:00:00.0	50.0000	78.0000	0.00		35		NACS	-	RFAE	4	0
1958073	03/14/58	00:00:00.0	73.0000	55.0000	0.00		40		NACS	-	RFAE	4	0
1958074	03/15/58	00:00:00.0	50.0000	78.0000	0.00		14		NACS	-	RFAE	4	0
1958077	03/18/58	00:00:00.0	50.0000	78.0000	0.00		.16		NACS	-	RFAE	1	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1958079	03/20/58	00:00:00.0	50.0000	78.0000	0.00		12		NACS	-	RFAE	4	0
1958080	03/21/58	00:00:00.0	73.0000	55.0000	0.00		650		NACS	-	RFAE	4	0
1958081	03/22/58	00:00:00.0	50.0000	78.0000	0.00		18		NACS	-	RFAE	4	0
1958273	09/30/58	00:00:00.0	73.0000	55.0000	0.00		900		NACS	-	RFAE	3	0
1958273	09/30/58	00:00:00.0	73.0000	55.0000	0.00		1200		NACS	-	RFAE	4	0
1958275	10/02/58	00:00:00.0	73.0000	55.0000	0.00		40		NACS	-	RFAE	3	0
1958275	10/02/58	00:00:00.0	73.0000	55.0000	0.00		290		NACS	-	RFAE	4	0
1958277	10/04/58	00:00:00.0	73.0000	55.0000	0.00		9		NACS	-	RFAE	1	0
1958278	10/05/58	00:00:00.0	73.0000	55.0000	0.00		15		NACS	-	RFAE	4	0
1958279	10/06/58	00:00:00.0	73.0000	55.0000	0.00		5.5		NACS	-	RFAE	1	0
1958283	10/10/58	00:00:00.0	73.0000	55.0000	0.00		68		NACS	-	RFAE	4	0
1958285	10/12/58	00:00:00.0	73.0000	55.0000	0.00		1450		NACS	-	RFAE	4	0
1958288	10/15/58	00:00:00.0	73.0000	55.0000	0.00		1500		NACS	-	RFAE	4	0
1958291	10/18/58	00:00:00.0	73.0000	55.0000	0.00		2900		NACS	-	RFAE	4	0
1958292	10/19/58	00:00:00.0	73.0000	55.0000	0.00		0	.001	NACS	-	RFAE	1	0
1958292	10/19/58	00:00:00.0	73.0000	55.0000	0.00		40		NACS	-	RFAE	4	0
1958293	10/20/58	00:00:00.0	73.0000	55.0000	0.00		440		NACS	-	RFAE	4	0
1958294	10/21/58	00:00:00.0	73.0000	55.0000	0.00		2		NACS	-	RFAE	1	0
1958295	10/22/58	00:00:00.0	73.0000	55.0000	0.00		2800		NACS	-	RFAE	4	0
1958297	10/24/58	00:00:00.0	73.0000	55.0000	0.00		1000		NACS	-	RFAE	4	0
1958298	10/25/58	00:00:00.0	73.0000	55.0000	0.00		0	.1	NACS	-	RFAE	1	0
1958298	10/25/58	00:00:00.0	73.0000	55.0000	0.00		190		NACS	-	RFAE	4	0
1958305	11/01/58	00:00:00.0	49.0000	46.0000	0.00		10		NACS	-	RFAE	4	0
1958307	11/03/58	00:00:00.0	49.0000	46.0000	0.00		10		NACS	-	RFAE	4	0
1961244	09/01/61	00:00:00.0	50.0000	78.0000	0.00		16		NACS	-	RFAE	4	0
1961247	09/04/61	00:00:00.0	50.0000	78.0000	0.00		9		NACS	-	RFAE	4	0
1961248	09/05/61	00:00:00.0	50.0000	78.0000	0.00		16		NACS	-	RFAE	4	0
1961249	09/06/61	00:00:00.0	50.0000	78.0000	0.00		1.1		NACS	-	RFAE	1	0
1961249	09/06/61	00:00:00.0	49.0000	46.0000	0.00		11		NACS	-	RFAE	4	0
1961252	09/09/61	00:00:00.0	50.0000	78.0000	0.00		.38		NACS	-	RFAE	1	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1961253	09/10/61	00:00:00.0	73.0000	55.0000	0.00		12		NACS	-	RFAE	4	0
1961253	09/10/61	00:00:00.0	50.0000	78.0000	0.00		.88		NACS	-	RFAE	1	0
1961253	09/10/61	09:00:09.2	74.2000	52.5000	0.00		2700		NACS	-	PDE	6	0
1961254	09/11/61	00:00:00.0	50.0000	78.0000	0.00		.3		NACS	-	RFAE	1	0
1961255	09/12/61	10:08:15.3	74.2000	52.1000	0.00		1150		NACS	-	PDE	6	0
1961256	09/13/61	00:00:00.0	50.0000	78.0000	0.00		.001	20	NACS	-	RFAE	4	0
1961256	09/13/61	00:00:00.0	70.8700	53.3300	0.00		6		NACS	-	KHRISTOFOROV	5	0
1961257	09/14/61	00:00:00.0	50.0000	78.0000	0.00		.4		NACS	-	RFAE	1	0
1961257	09/14/61	09:56:16.7	74.6000	51.1000	0.00		1200		NACS	-	PDE	5	0
1961259	09/16/61	09:08:13.7	74.0000	51.9000	0.00		830		NACS	-	PDE	6	0
1961260	09/17/61	00:00:00.0	50.0000	78.0000	0.00		20	150	NACS	-	RFAE	4	0
1961261	09/18/61	00:00:00.0	50.0000	78.0000	0.00		.004		NACS	-	RFAE	1	0
1961261	09/18/61	00:00:00.0	50.0000	78.0000	0.00		.75		NACS	-	RFAE	1	0
1961261	09/18/61	07:59:36.8	74.0000	52.0000	0.00		1000		NACS	-	PDE	5	0
1961262	09/19/61	00:00:00.0	50.0000	78.0000	0.00		.03		NACS	-	RFAE	1	0
1961263	09/20/61	00:00:00.0	50.0000	78.0000	0.00		4.8		NACS	-	RFAE	1	0
1961263	09/20/61	00:00:00.0	73.0000	55.0000	0.00		150	1500	NACS	-	RFAE	4	0
1961264	09/21/61	00:00:00.0	50.0000	78.0000	0.00		.8		NACS	-	RFAE	1	0
1961265	09/22/61	00:00:00.0	73.0000	55.0000	0.00		260		NACS	-	RFAE	4	0
1961269	09/26/61	00:00:00.0	50.0000	78.0000	0.00		1.2		NACS	-	RFAE	1	0
1961274	10/01/61	00:00:00.0	50.0000	78.0000	0.00		3		NACS	-	RFAE	1	0
1961275	10/02/61	00:00:00.0	73.0000	55.0000	0.00		250		NACS	-	RFAE	4	0
1961277	10/04/61	00:00:00.0	50.0000	78.0000	0.00		13		NACS	-	RFAE	1	0
1961277	10/04/61	07:30:54.8	73.7000	53.8000	0.00		1500	10000	NACS	-	PDE	5	0
1961279	10/06/61	00:00:00.0	49.0000	46.0000	0.00		40		NACS	-	RFAE	1	0
1961279	10/06/61	07:00:12.2	74.3000	51.6000	0.00		4000		NACS	-	PDE	6	0
1961281	10/08/61	00:00:00.0	73.0000	55.0000	0.00		15		NACS	-	RFAE	4	0
1961284	10/11/61	07:39:59.9	49.7727	77.9950	0.00		1		NUCS	-	BOCHAROV	7	0
1961285	10/12/61	00:00:00.0	50.0000	78.0000	0.00		15		NACS	-	RFAE	4	0
1961290	10/17/61	00:00:00.0	50.0000	78.0000	0.00		6.6		NACS	-	RFAE	1	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1961292	10/19/61	00:00:00.0	50.0000	78.0000	0.00		.001	20	NACS	-	RFAE	1	0
1961293	10/20/61	08:07:02.0	73.8000	53.2000	0.00		1450		NACS	-	PDE	6	0
1961296	10/23/61	08:31:22.1	73.9000	53.8000	0.00		4.8		NWCS	-	PDE	5	0
1961296	10/23/61	10:30:48.0	70.7000	54.5600	0.05		12500		NACS	-	KHRISTOFOROV	8	0
1961298	10/25/61	00:00:00.0	73.0000	55.0000	0.00		300		NACS	-	RFAE	4	0
1961298	10/25/61	00:00:00.0	50.0000	78.0000	0.00		.5		NACS	-	RFAE	1	0
1961300	10/27/61	00:00:00.0	49.0000	46.0000	0.00		1.2		NACS	-	RFAE	1	0
1961300	10/27/61	00:00:00.0	49.0000	46.0000	0.00		1.2		NACS	-	RFAE	1	0
1961300	10/27/61	08:30:26.0	70.7000	54.6700	0.00		16		NWCS	-	KHRISTOFOROV	6	0
1961303	10/30/61	00:00:00.0	50.0000	78.0000	0.00		.09		NACS	-	RFAE	1	0
1961303	10/30/61	08:33:27.8	73.8000	53.5000	0.00		50000		NACS	-	PDE	6	0
1961304	10/31/61	00:00:00.0	73.0000	55.0000	0.00		150	1500	NACS	-	RFAE	4	0
1961304	10/31/61	08:29:17.2	73.6000	56.2000	0.00		5000		NACS	-	PDE	6	0
1961305	11/01/61	00:00:00.0	50.0000	78.0000	0.00		2.7		NACS	-	RFAE	1	0
1961306	11/02/61	00:00:00.0	73.0000	55.0000	0.00		120		NACS	-	RFAE	4	0
1961306	11/02/61	00:00:00.0	73.0000	55.0000	0.00		280		NACS	-	RFAE	4	0
1961306	11/02/61	00:00:00.0	50.0000	78.0000	0.00		.6		NACS	-	RFAE	1	0
1961307	11/03/61	00:00:00.0	50.0000	78.0000	0.00		0	.001	NACS	-	RFAE	1	0
1961307	11/03/61	00:00:00.0	50.0000	78.0000	0.00		.9		NACS	-	RFAE	1	0
1961308	11/04/61	00:00:00.0	73.0000	55.0000	0.00		15		NACS	-	RFAE	1	0
1961308	11/04/61	00:00:00.0	73.0000	55.0000	0.00		6		NACS	-	RFAE	1	0
1961308	11/04/61	00:00:00.0	50.0000	78.0000	0.00		.2		NACS	-	RFAE	1	0
1961308	11/04/61	07:20:19.7	73.7000	55.7000	0.00		150	1500	NACS	-	PDE	6	0
1962033	02/02/62	08:00:00.2	49.7775	78.0016	0.00		.001	20	NUCS	-	BOCHAROV	9	0
1962213	08/01/62	00:00:00.0	50.0000	78.0000	0.00		2.4		NACS	-	RFAE	1	0
1962215	08/03/62	00:00:00.0	50.0000	78.0000	0.00		1.6		NACS	-	RFAE	1	0
1962216	08/04/62	00:00:00.0	50.0000	78.0000	0.00		38		NACS	-	RFAE	1	0
1962217	08/05/62	09:08:45.8	74.2000	52.5000	0.00		21100		NACS	-	PDE	5	0
1962219	08/07/62	00:00:00.0	50.0000	78.0000	0.00		9.9		NACS	-	RFAE	4	0
1962222	08/10/62	00:00:00.0	73.0000	55.0000	0.00		150	1500	NACS	-	RFAE	4	0

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1962230	08/18/62	00:00:00.0	50.0000	78.0000	0.00		7.4		NACS	-	RFAE	1	0
1962230	08/18/62	00:00:00.0	50.0000	78.0000	0.00		5.8		NACS	-	RFAE	1	0
1962232	08/20/62	09:02:14.1	74.3000	51.5000	0.00		2800		NACS	-	PDE	5	0
1962233	08/21/62	00:00:00.0	50.0000	78.0000	0.00		20	150	NACS	-	RFAE	1	0
1962234	08/22/62	00:00:00.0	73.0000	55.0000	0.00		6		NWCS	-	RFAE	1	0
1962234	08/22/62	00:00:00.0	50.0000	78.0000	0.00		3		NACS	-	RFAE	1	0
1962234	08/22/62	09:00:00.0	71.0000	53.5000	0.00		1600		NACS	-	KHRISTOFOROV	7	0
1962235	08/23/62	00:00:00.0	50.0000	78.0000	0.00		2.5		NACS	-	RFAE	1	0
1962237	08/25/62	00:00:00.0	50.0000	78.0000	0.00		.001	20	NACS	-	RFAE	4	0
1962237	08/25/62	00:00:00.0	73.0000	55.0000	0.00		1500	10000	NACS	-	RFAE	4	0
1962239	08/27/62	00:00:00.0	50.0000	78.0000	0.00		11		NACS	-	RFAE	1	0
1962239	08/27/62	09:00:50.9	74.7000	50.3000	0.00		4200		NACS	-	PDE	6	0
1962243	08/31/62	00:00:00.0	50.0000	78.0000	0.00		2.7		NACS	-	RFAE	1	0
1962245	09/02/62	00:00:00.0	73.0000	55.0000	0.00		80		NACS	-	RFAE	4	0
1962251	09/08/62	10:17:57.7	73.7000	53.8000	0.00		1900		NACS	-	PDE	6	0
1962258	09/15/62	08:02:13.9	74.4000	51.5000	0.00		3100		NACS	-	PDE	5	0
1962259	09/16/62	10:59:10.5	74.2000	51.6000	0.00		3250		NACS	-	PDE	6	0
1962261	09/18/62	08:29:02.7	73.2000	54.7000	0.00		1350		NACS	-	PDE	5	0
1962262	09/19/62	11:00:56.4	73.8000	53.8000	0.00		1500	10000	NACS	-	PDE	5	0
1962264	09/21/62	00:00:00.0	73.0000	55.0000	0.00		2400		NACS	-	RFAE	4	0
1962265	09/22/62	00:00:00.0	50.0000	78.0000	0.00		.21		NACS	-	RFAE	1	0
1962267	09/24/62	00:00:00.0	50.0000	78.0000	0.00		1.2		NACS	-	RFAE	1	0
1962268	09/25/62	00:00:00.0	50.0000	78.0000	0.00		7		NACS	-	RFAE	1	0
1962268	09/25/62	13:02:31.7	73.7000	55.0000	0.00		19100		NACS	-	PDE	6	0
1962270	09/27/62	08:03:16.4	74.3000	52.4000	0.00		10000		NACS	-	PDE	5	0
1962271	09/28/62	00:00:00.0	50.0000	78.0000	0.00		1.3		NACS	-	RFAE	1	0
1962280	10/07/62	00:00:00.0	73.0000	55.0000	0.00		320		NACS	-	RFAE	4	0
1962282	10/09/62	00:00:00.0	50.0000	78.0000	0.00		8		NACS	-	RFAE	1	0
1962282	10/09/62	00:00:00.0	73.0000	55.0000	0.00		15		NACS	-	RFAE	1	0
1962283	10/10/62	00:00:00.0	50.0000	78.0000	0.00		9.2		NACS	-	RFAE	1	0

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1962286	10/13/62	00:00:00.0	50.0000	78.0000	0.00		4.9		NACS	-	RFAE	1	0
1962287	10/14/62	00:00:00.0	50.0000	78.0000	0.00		.001	20	NACS	-	RFAE	4	0
1962293	10/20/62	00:00:00.0	50.0000	78.0000	0.00		6.7		NACS	-	RFAE	1	0
1962295	10/22/62	00:00:00.0	49.0000	46.0000	0.00		300		NACS	-	RFAE	4	0
1962295	10/22/62	09:06:10.1	73.4000	54.9000	0.00		8200		NACS	-	PDE	5	0
1962300	10/27/62	00:00:00.0	73.0000	55.0000	0.00		260		NACS	-	RFAE	4	0
1962301	10/28/62	00:00:00.0	50.0000	78.0000	0.00		7.8		NACS	-	RFAE	4	0
1962301	10/28/62	00:00:00.0	49.0000	46.0000	0.00		300		NACS	-	RFAE	4	0
1962301	10/28/62	00:00:00.0	50.0000	78.0000	0.00		7.8		NACS	-	RFAE	1	0
1962302	10/29/62	00:00:00.0	73.0000	55.0000	0.00		360		NACS	-	RFAE	4	0
1962303	10/30/62	00:00:00.0	50.0000	78.0000	0.00		1.2		NACS	-	RFAE	1	0
1962303	10/30/62	00:00:00.0	73.0000	55.0000	0.00		280		NACS	-	RFAE	4	0
1962304	10/31/62	00:00:00.0	50.0000	78.0000	0.00		10		NACS	-	RFAE	1	0
1962305	11/01/62	00:00:00.0	73.0000	55.0000	0.00		240		NACS	-	RFAE	4	0
1962305	11/01/62	00:00:00.0	49.0000	46.0000	0.00		300		NACS	-	RFAE	1	0
1962305	11/01/62	00:00:00.0	50.0000	78.0000	0.00		3		NACS	-	RFAE	4	0
1962307	11/03/62	00:00:00.0	50.0000	78.0000	0.00		4.7		NACS	-	RFAE	1	0
1962307	11/03/62	00:00:00.0	73.0000	55.0000	0.00		390		NACS	-	RFAE	4	0
1962307	11/03/62	00:00:00.0	73.0000	55.0000	0.00		45		NACS	-	RFAE	4	0
1962308	11/04/62	00:00:00.0	50.0000	78.0000	0.00		8.4		NACS	-	RFAE	4	0
1962309	11/05/62	00:00:00.0	50.0000	78.0000	0.00		.4		NACS	-	RFAE	1	0
1962315	11/11/62	00:00:00.0	50.0000	78.0000	0.00		.1		NACS	-	RFAE	1	0
1962317	11/13/62	00:00:00.0	50.0000	78.0000	0.00		0	.001	NACS	-	RFAE	1	0
1962318	11/14/62	00:00:00.0	50.0000	78.0000	0.00		12		NACS	-	RFAE	1	0
1962321	11/17/62	00:00:00.0	50.0000	78.0000	0.00		18		NACS	-	RFAE	4	0
1962328	11/24/62	00:00:00.0	50.0000	78.0000	0.00		0	.001	NACS	-	RFAE	1	0
1962330	11/26/62	00:00:00.0	50.0000	78.0000	0.00		.031		NACS	-	RFAE	1	0
1962335	12/01/62	00:00:00.0	50.0000	78.0000	0.00		2.4		NACS	-	RFAE	1	0
1962352	12/18/62	00:00:00.0	73.0000	55.0000	0.00		110		NACS	-	RFAE	4	0
1962352	12/18/62	00:00:00.0	73.0000	55.0000	0.00		69		NACS	-	RFAE	4	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1962354	12/20/62	00:00:00.0	73.0000	55.0000	0.00		8.3		NACS	-	RFAE	4	0
1962356	12/22/62	00:00:00.0	73.0000	55.0000	0.00		6.3		NACS	-	RFAE	4	0
1962357	12/23/62	00:00:00.0	73.0000	55.0000	0.00		8.3		NACS	-	RFAE	1	0
1962357	12/23/62	00:00:00.0	73.0000	55.0000	0.00		2.4		NACS	-	RFAE	1	0
1962357	12/23/62	00:00:00.0	50.0000	78.0000	0.00		0	.001	NACS	-	RFAE	1	0
1962357	12/23/62	00:00:00.0	73.0000	55.0000	0.00		430		NACS	-	RFAE	4	0
1962358	12/24/62	00:00:00.0	50.0000	78.0000	0.00		.007		NACS	-	RFAE	1	0
1962358	12/24/62	00:00:00.0	50.0000	78.0000	0.00		.028		NACS	-	RFAE	1	0
1962358	12/24/62	10:44:21.9	74.2000	52.3000	0.00		1100		NACS	-	PDE	4	0
1962358	12/24/62	11:11:42.0	73.6000	57.5000	0.00		24200		NACS	-	PDE	3	0
1962359	12/25/62	00:00:00.0	73.0000	55.0000	0.00		8.5		NACS	-	RFAE	1	0
1962359	12/25/62	13:35:57.2	73.4000	56.5000	0.00		3100		NACS	-	PDE	4	0
1964075	03/15/64	08:00:00.4	49.8160	78.0752	0.00	5.60	20	150	NUCS	-	BOCHAROV	10	0
1964137	05/16/64	06:00:59.8	49.8077	78.1020	0.00	5.60	20	150	NUCS	-	BOCHAROV	10	0
1964158	06/06/64	00:00:00.0	49.7747	77.9881	0.00		.001	20	NUCS	-	KRR	2	0
1964201	07/19/64	06:00:00.6	49.8091	78.0929	0.00	5.50	20	150	NUCS	-	BOCHAROV	10	0
1964231	08/18/64	06:00:00.0	49.8206	78.0819	0.00		.001	20	NUCS	-	KRR	2	0
1964262	09/18/64	08:00:00.4	73.6670	54.5330	0.00	4.19	.001	20	NUCS	-	AWE-JED	10	10
1964274	09/30/64	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1964299	10/25/64	07:59:58.1	73.3870	54.9850	0.00	5.10	.001	20	NUCS	-	RICHARDS	11	51
1964321	11/16/64	06:00:00.2	49.8087	78.1334	0.00	6.00	20	150	NUCS	-	BOCHAROV	10	0
1965015	01/15/65	06:00:00.8	49.9350	79.0090	0.18	5.80	140		NUCS	PNE:Chagan 1004	SULTANOV	14	74
1965035	02/04/65	06:00:00.0	49.7731	77.9914	0.00		.001	20	NUCS	-	KRR	2	0
1965062	03/03/65	06:14:59.4	49.8247	78.0527	0.00	5.60	.001	20	NUCS	-	BOCHAROV	10	0
1965086	03/27/65	06:30:00.0	49.7747	77.9881	0.00		.001	20	NUCS	-	KRR	2	0
1965089	03/30/65	08:00:00.0	52.9000	56.5000	1.38		2.3		NUCS_SALVO	PNE:Butane 1-1	SULTANOV	3	0
1965131	05/11/65	06:40:00.2	49.7702	77.9943	0.00	5.20	.001	20	NUCS	-	BOCHAROV	10	0
1965161	06/10/65	07:00:00.0	52.9000	56.5000	1.35		7.6		NUCS	PNE:Butane 1-2	SULTANOV	2	0
1965168	06/17/65	03:45:00.0	49.8284	78.0669	0.00	5.40	.001	20	NUCS	-	BOCHAROV	11	0
1965210	07/29/65	03:05:00.2	49.7797	77.9981	0.00	4.50	.001	20	NUCS	-	BOCHAROV	9	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1965260	09/17/65	04:00:00.1	49.8116	78.1467	0.00	5.60	.001	20	NUCS	-	BOCHAROV	11	0
1965281	10/08/65	06:00:00.4	49.8259	78.1114	0.00	5.70	.001	20	NUCS	-	BOCHAROV	10	0
1965287	10/14/65	04:00:00.2	49.9910	77.6360	0.05		1.1		NUCS	PNE:Sary-Uzen 1003	SULTANOV	4	0
1965325	11/21/65	04:58:00.0	49.8192	78.0636	0.00	5.80	29		NUCS	-	BOCHAROV	11	2
1965358	12/24/65	05:00:00.2	49.8045	78.1067	0.00	5.20	.001	20	NUCS	-	BOCHAROV	10	0
1966044	02/13/66	04:58:00.1	49.8089	78.1210	0.00	6.20	125		NUCS	-	BOCHAROV	10	1
1966079	03/20/66	05:50:00.3	49.7616	78.0239	0.00	6.20	100		NUCS	-	BOCHAROV	10	1
1966111	04/21/66	03:58:00.1	49.8097	78.1000	0.00	5.40	.001	20	NUCS	-	BOCHAROV	11	0
1966112	04/22/66	02:58:00.3	47.8290	47.9350	0.16	4.70	1.1		NUCS	PNE:Azgir A-1	SULTANOV	10	0
1966127	05/07/66	03:58:00.2	49.7429	78.1050	0.00	4.80	4		NUCS	-	BOCHAROV	11	3
1966180	06/29/66	06:58:00.5	49.8344	78.0734	0.00	5.60	20	150	NUCS	-	BOCHAROV	11	0
1966202	07/21/66	03:58:00.0	49.7367	78.0970	0.00	5.40	20	150	NUCS	-	BOCHAROV	10	0
1966217	08/05/66	03:57:59.6	49.7643	78.0424	0.00	5.50	.001	20	NUCS	-	BOCHAROV	10	0
1966231	08/19/66	03:52:59.9	49.8271	78.1088	0.00	5.10	.001	20	NUCS	-	BOCHAROV	11	0
1966250	09/07/66	03:51:59.7	49.8288	78.0638	0.00	4.80	.001	20	NUCS	-	BOCHAROV	10	0
1966273	09/30/66	05:59:51.0	38.9680	64.5170	1.53	5.10	30		NUCS	PNE:Urtabulak	SULTANOV	6	0
1966292	10/19/66	03:57:59.9	49.7471	78.0205	0.00	5.70	20	150	NUCS	-	BOCHAROV	10	0
1966300	10/27/66	00:00:00.0	73.0000	55.0000	0.00		150	1500	NUCS	-	RFAE	1	0
1966300	10/27/66	05:57:58.1	73.3870	54.8360	0.00	6.49	150	1500	NUCS	-	RICHARDS	10	80
1966302	10/29/66	03:58:00.0	49.7847	77.9994	0.00		.001	20	NUCS	-	KRR	2	0
1966323	11/19/66	03:58:00.0	49.8297	78.0575	0.00		.001	20	NUCS	-	KRR	2	0
1966337	12/03/66	05:02:00.2	49.7469	78.0334	0.00	4.80	.001	20	NUCS_SALVO	-	BOCHAROV	9	0
1966352	12/18/66	04:58:00.0	49.9246	77.7472	0.00	5.90	20	150	NUCS	-	BOCHAROV	11	8
1967030	01/30/67	04:01:59.5	49.7674	77.9914	0.00	4.80	.001	20	NUCS_SALVO	-	BOCHAROV	10	0
1967057	02/26/67	03:57:59.8	49.7457	78.0823	0.00	6.00	20	150	NUCS	-	BOCHAROV	11	136
1967084	03/25/67	05:58:01.1	49.7536	78.0630	0.00	5.30	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1967110	04/20/67	04:08:00.0	49.7416	78.1054	0.00	5.70	20	150	NUCS	-	BOCHAROV	11	0
1967148	05/28/67	04:07:59.6	49.7564	78.0169	0.00	5.50	.001	20	NUCS_SALVO	-	BOCHAROV	10	0
1967180	06/29/67	02:56:59.9	49.8167	78.0490	0.00	5.30	.001	20	NUCS	-	BOCHAROV	8	0
1967196	07/15/67	03:26:59.9	49.8359	78.1182	0.00	5.40	.001	20	NUCS	-	BOCHAROV	10	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1967216	08/04/67	06:58:00.3	49.7603	78.0555	0.00	5.30	.001	20	NUCS_SALVO	-	BOCHAROV	9	0
1967245	09/02/67	04:04:00.0	49.7419	78.0256	0.00		.001	20	NUCS	-	KRR	2	0
1967259	09/16/67	04:04:00.3	49.9372	77.7281	0.00	5.30	.001	20	NUCS	-	BOCHAROV	11	0
1967265	09/22/67	05:03:59.0	49.9596	77.6911	0.00	5.30	10		NUCS	-	BOCHAROV	11	1
1967279	10/06/67	06:59:57.5	57.7000	65.2000	0.17	4.70	.3		NUCS	PNE:Tawda	SULTANOV	9	0
1967290	10/17/67	05:04:00.2	49.7809	78.0038	0.00	5.70	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1967294	10/21/67	04:59:58.5	73.3900	54.8100	0.00	5.98	150	1500	NUCS_SALVO	-	RICHARDS	12	73
1967303	10/30/67	06:04:00.0	49.7944	78.0079	0.00	5.50	.001	20	NUCS	-	BOCHAROV	10	0
1967326	11/22/67	04:03:59.9	49.9419	77.6868	0.00	4.80	.001	20	NUCS	-	BOCHAROV	11	0
1967342	12/08/67	06:03:59.8	49.8171	78.1638	0.00	5.40	.001	20	NUCS	-	BOCHAROV	10	0
1968007	01/07/68	03:46:59.9	49.7544	78.0309	0.00	5.30	.001	20	NUCS	-	BOCHAROV	10	0
1968115	04/24/68	10:35:59.7	49.8452	78.1032	0.00	5.00	.001	20	NUCS	-	BOCHAROV	10	0
1968142	05/21/68	03:59:12.0	38.9180	65.0320	2.44	5.40	47		NUCS	PNE:Pamuk	SULTANOV	9	20
1968144	05/23/68	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1968163	06/11/68	03:05:59.7	49.7930	78.1451	0.00	5.30	.001	20	NUCS	-	BOCHAROV	10	0
1968171	06/19/68	05:05:59.8	49.9803	78.9855	0.00	5.50	.001	20	NUCS	-	BOCHAROV	13	80
1968183	07/01/68	04:02:00.5	47.9090	47.9120	0.60	5.50	27		NUCS	PNE:Azgir A-2-1	SULTANOV	10	5
1968194	07/12/68	12:08:00.0	49.7547	78.0899	0.00	5.40	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1968233	08/20/68	04:05:59.6	49.8226	78.0745	0.00	4.80	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1968249	09/05/68	04:05:59.6	49.7416	78.0756	0.00	5.50	.001	20	NUCS	-	BOCHAROV	10	0
1968273	09/29/68	03:43:00.0	49.8120	78.1219	0.00	5.80	60		NUCS	-	BOCHAROV	10	3
1968295	10/21/68	03:52:00.0	49.7280	78.4860	0.03		.24		NUCS	PNE:Telkem 1	SULTANOV	4	0
1968303	10/29/68	03:54:00.0	49.8333	78.0928	0.00		.001	20	NUCS	-	KRR	2	0
1968312	11/07/68	10:02:05.5	73.3870	54.8580	0.00	6.13	150	1500	NUCS_SALVO	-	RICHARDS	13	118
1968314	11/09/68	02:54:00.1	49.8005	78.1391	0.00	4.90	.001	20	NUCS	-	BOCHAROV	10	0
1968317	11/12/68	07:30:00.0	49.7120	78.4610	0.03		.24		NUCS_SALVO	PNE:Telkem 2	SULTANOV	8	0
1968353	12/18/68	05:01:59.7	49.7459	78.0920	0.00	5.20	.001	20	NUCS	-	BOCHAROV	10	0
1969066	03/07/69	08:26:59.8	49.8215	78.0627	0.00	5.60	20	150	NUCS	-	BOCHAROV	10	0
1969094	04/04/69	04:57:00.0	49.7533	78.0536	0.00		.001	20	NUCS	-	KRR	2	0
1969102	04/13/69	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	2	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1969136	05/16/69	04:02:59.7	49.7594	78.0758	0.00	5.30	.001	20	NUCS	-	BOCHAROV	10	0
1969151	05/31/69	05:01:59.4	49.9503	77.6942	0.00	5.40	.001	20	NUCS	-	BOCHAROV	11	0
1969185	07/04/69	02:46:59.6	49.7460	78.1113	0.00	5.30	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1969204	07/23/69	02:47:00.2	49.8156	78.1296	0.00	5.50	16		NUCS	-	BOCHAROV	11	3
1969245	09/02/69	04:59:58.6	57.2200	55.3930	1.21	4.80	7.6		NUCS	PNE:Grifon-1	SULTANOV	11	20
1969251	09/08/69	04:59:58.7	57.2200	55.4170	1.21	4.80	7.6		NUCS	PNE:Grifon-2	SULTANOV	11	20
1969254	09/11/69	04:02:00.0	49.7763	77.9967	0.00	5.00	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1969269	09/26/69	06:59:58.1	45.8480	42.6000	0.71	5.60	10		NUCS	PNE:Stavropol	SULTANOV	11	20
1969274	10/01/69	04:02:59.9	49.7825	78.0983	0.00	5.30	.001	20	NUCS_SALVO	-	BOCHAROV	11	0
1969287	10/14/69	07:00:06.6	73.3900	54.7870	0.00	6.30	150	1500	NUCS_SALVO	-	RICHARDS	13	80
1969303	10/30/69	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1969331	11/27/69	05:02:00.0	49.8367	78.0597	0.00		.001	20	NUCS	-	KRR	2	0
1969334	11/30/69	03:32:59.7	49.9243	78.9558	0.00	6.00	125		NUCS	-	BOCHAROV	13	130
1969340	12/06/69	07:02:59.9	43.8670	54.8000	0.41	5.80	30		NUCS	PNE:Mangyshlak-1	SULTANOV	9	0
1969362	12/28/69	03:47:00.2	49.9373	77.7142	0.00	5.70	40		NUCS	-	BOCHAROV	11	2
1969363	12/29/69	04:02:00.0	49.7337	78.1023	0.00	5.10	.001	20	NUCS	-	BOCHAROV	10	0
1970029	01/29/70	07:03:00.0	49.7956	78.1239	0.00	5.60	.001	20	NUCS_SALVO	-	BOCHAROV	12	0
1970049	02/18/70	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1970086	03/27/70	05:02:59.6	49.7478	77.9990	0.00	5.20	.001	20	NUCS	-	BOCHAROV	9	0
1970147	05/27/70	04:03:00.0	49.7313	78.0986	0.00		.001	20	NUCS	-	BOCHAROV	5	0
1970176	06/25/70	04:59:55.5	52.2000	55.7000	0.70	4.90	2.3		NUCS	PNE:Magistral	SULTANOV	9	20
1970179	06/28/70	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS_SALVO	-	RFAE	2	0
1970179	06/28/70	01:58:00.0	49.8015	78.1068	0.00	5.90	20	150	NUCS	-	BOCHAROV	10	0
1970202	07/21/70	03:02:59.7	49.9524	77.6729	0.00	5.40	.001	20	NUCS	-	BOCHAROV	10	0
1970205	07/24/70	03:57:00.0	49.8097	78.1284	0.00	5.30	.001	20	NUCS	-	BOCHAROV	10	0
1970249	09/06/70	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1970249	09/06/70	04:02:59.9	49.7598	78.0054	0.00	5.60	.001	20	NUCS	-	BOCHAROV	10	0
1970287	10/14/70	05:59:57.6	73.3040	55.0270	0.00	6.79	150	1500	NUCS_SALVO	-	RICHARDS	13	173
1970308	11/04/70	06:02:59.8	49.9892	77.7624	0.00	5.40	.001	20	NUCS	-	BOCHAROV	11	0
1970346	12/12/70	07:00:59.8	43.8500	54.8000	0.50	6.00	80		NUCS	PNE:Mangyshlak-2	SULTANOV	9	24

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1970351	12/17/70	07:01:00.0	49.7456	78.0992	0.00	5.50	20	150	NUCS	-	BOCHAROV	10	0
1970357	12/23/70	07:00:59.8	44.0250	54.9330	0.47	6.00	75		NUCS	PNE:Mangyshlak-3	SULTANOV	10	23
1971029	01/29/71	05:03:00.0	49.8053	78.1686	0.00		.001	20	NUCS	-	KRR	2	0
1971081	03/22/71	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1971081	03/22/71	04:33:00.3	49.7985	78.1090	0.00	5.80	20	150	NUCS	-	BOCHAROV	11	0
1971082	03/23/71	06:59:58.4	61.4000	56.2000	0.13	5.50	15		NUCS_SALVO	PNE:Taiga	SULTANOV	11	37
1971099	04/09/71	02:33:00.0	49.8322	78.0386	0.00		.23		NUCS	PNE	KRR	2	0
1971115	04/25/71	03:32:59.9	49.7685	78.0339	0.00	5.90	90		NUCS	-	BOCHAROV	11	88
1971145	05/25/71	04:03:00.4	49.8016	78.1388	0.00	5.20	.001	20	NUCS	-	BOCHAROV	11	0
1971157	06/06/71	04:02:59.7	49.9754	77.6603	0.00	5.50	16		NUCS	-	BOCHAROV	11	4
1971170	06/19/71	04:04:00.1	49.9690	77.6408	0.00	5.50	.001	20	NUCS	-	BOCHAROV	11	3
1971181	06/30/71	03:56:59.8	49.9460	78.9805	0.00	5.40	.001	20	NUCS	-	BOCHAROV	13	80
1971183	07/02/71	17:00:01.1	67.2830	63.4670	0.54	4.70	2.3		NUCS	PNE:Globe-4	SULTANOV	7	0
1971191	07/10/71	17:00:01.4	64.1670	55.2670	0.47	5.20	2.3		NUCS	PNE:Globe-3	SULTANOV	10	0
1971262	09/19/71	11:00:01.1	57.5080	42.6430	0.61	4.50	2.3		NUCS	PNE:Globe-1	SULTANOV	10	0
1971270	09/27/71	05:59:55.8	73.3930	54.9200	0.00	6.67	150	1500	NUCS_SALVO	-	RICHARDS	15	313
1971277	10/04/71	10:00:00.1	61.3580	48.0920	0.60	4.60	2.3		NUCS	PNE:Globe-2	SULTANOV	10	0
1971282	10/09/71	06:02:59.7	49.9779	77.6414	0.00	5.40	12		NUCS	-	BOCHAROV	11	4
1971294	10/21/71	06:02:59.7	49.9738	77.5973	0.00	5.60	23		NUCS	-	BOCHAROV	11	3
1971295	10/22/71	05:00:01.0	51.6000	54.4500	1.14	5.20	15		NUCS	PNE:Sapphire-1	SULTANOV	10	20
1971333	11/29/71	06:02:59.9	49.7434	78.0785	0.00	5.50	.001	20	NUCS_SALVO	-	BOCHAROV	12	0
1971349	12/15/71	07:53:59.8	49.8264	77.9973	0.00	4.90	.001	20	NUCS	-	BOCHAROV	11	0
1971356	12/22/71	06:59:59.0	47.8970	48.1330	0.99	6.00	64		NUCS	PNE:Azgir A-3-1	SULTANOV	10	1
1971364	12/30/71	00:00:00.0	50.0000	78.0000	0.00		20	150	NUCS	-	RFAE	1	22
1971364	12/30/71	06:21:00.2	49.7600	78.0371	0.00	5.80	.001	20	NUCS	-	BOCHAROV	11	137
1972041	02/10/72	05:03:00.0	50.0243	78.8781	0.00	5.50	16		NUCS	-	BOCHAROV	13	44
1972070	03/10/72	04:56:59.8	49.7453	78.1197	0.00	5.50	.001	20	NUCS_SALVO	-	BOCHAROV	12	0
1972088	03/28/72	04:22:00.1	49.7331	78.0757	0.00	5.20	.001	20	NUCS_SALVO	-	BOCHAROV	13	6
1972102	04/11/72	06:00:01.9	37.3500	62.0500	1.72	4.90	15		NUCS	PNE:Crater	SULTANOV	10	0
1972111	04/20/72	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1972159	06/07/72	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1972159	06/07/72	01:28:00.0	49.8268	78.1155	0.00	5.50	.001	20	NUCS	-	BOCHAROV	11	0
1972188	07/06/72	01:03:00.0	49.7375	78.1101	0.00	4.40	.001	20	NUCS	-	BOCHAROV	11	0
1972191	07/09/72	07:00:01.3	49.8000	35.4000	2.48	4.80	38		NUCS	PNE:Fakel	SULTANOV	8	0
1972209	07/27/72	00:00:00.0	73.0000	55.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1972229	08/16/72	03:16:59.8	49.7655	78.0588	0.00	5.20	8		NUCS	-	BOCHAROV	11	4
1972233	08/20/72	03:00:00.0	49.4000	48.1420	0.49	5.70	6.6		NUCS	PNE:Region-3	SULTANOV	10	0
1972239	08/26/72	03:46:59.7	49.9820	77.7166	0.00	5.50	.001	20	NUCS	-	BOCHAROV	11	0
1972241	08/28/72	05:59:56.9	73.3880	54.8470	0.00	6.49	150	1500	NUCS_SALVO	-	RICHARDS	15	258
1972246	09/02/72	08:56:59.9	49.9594	77.6409	0.00	5.10	2		NUCS	-	BOCHAROV	11	5
1972248	09/04/72	07:00:00.0	67.7500	33.1000	0.13	4.60	2.1		NUCS	PNE:Dnepr-1	SULTANOV	10	0
1972265	09/21/72	09:00:00.3	52.1180	52.0680	0.49	5.00	2.3		NUCS	PNE:Region-1	SULTANOV	10	0
1972277	10/03/72	09:00:00.2	46.8530	44.9380	0.49	5.60	6.6		NUCS	PNE:Region-4	SULTANOV	10	20
1972307	11/02/72	01:27:00.2	49.9270	78.8173	0.00	6.20	165		NUCS	-	BOCHAROV	13	52
1972329	11/24/72	09:00:00.0	51.9900	51.8670	0.68	4.50	2.3		NUCS	PNE:Region-2	SULTANOV	10	0
1972329	11/24/72	10:00:00.2	51.8420	64.2100	0.42	5.20	6.6		NUCS	PNE:Region-5	SULTANOV	10	0
1972345	12/10/72	04:27:00.0	49.8194	78.0582	0.00	5.70	20	150	NUCS_SALVO	-	BOCHAROV	12	63
1972345	12/10/72	04:27:10.0	50.0270	78.9956	0.00	6.00	140		NUCS	-	BOCHAROV	13	66
1972363	12/28/72	04:27:00.0	49.7392	78.1063	0.00		.001	20	NUCS	-	BOCHAROV	8	0
1973047	02/16/73	05:03:00.0	49.8160	78.1160	0.00	5.60	20	150	NUCS	-	AWE-JED	9	0
1973109	04/19/73	04:32:59.9	49.9840	77.6140	0.00	5.40	.001	20	NUCS	-	AWE-JED	9	0
1973191	07/10/73	01:27:00.2	49.7920	78.0420	0.00	5.40	.001	20	NUCS_SALVO	-	AWE-JED	11	0
1973204	07/23/73	01:23:00.1	49.9660	78.8100	0.00	6.30	150	1500	NUCS	-	AWE-JED	11	42
1973227	08/15/73	02:00:00.0	42.7750	67.4080	0.60	5.30	6.3		NUCS	PNE:Meridian-3	SULTANOV	9	20
1973240	08/28/73	03:00:00.0	50.5270	68.3230	0.40	5.20	6.3		NUCS	PNE:Meridian-1	SULTANOV	9	0
1973255	09/12/73	06:59:54.8	73.3140	55.0560	0.00	6.97	1500	10000	NUCS_SALVO	-	RICHARDS	14	331
1973262	09/19/73	03:00:00.2	45.7580	67.8250	0.62	5.10	6.3		NUCS	PNE:Meridian-2	SULTANOV	9	0
1973263	09/20/73	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	2	0
1973270	09/27/73	07:00:01.1	70.7310	53.8360	0.00	5.89	20	150	NUCS	-	AWE-JED	10	355
1973273	09/30/73	05:00:00.4	51.6500	54.5500	1.15	5.20	10		NUCS	PNE:Sapphire-2	SULTANOV	9	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1973299	10/26/73	04:27:00.1	49.7530	78.1220	0.00	5.30	.001	20	NUCS	-	AWE-JED	9	0
1973299	10/26/73	05:59:59.5	53.6500	55.4000	2.03	4.80	10		NUCS	PNE:Kama-2	SULTANOV	9	0
1973300	10/27/73	07:00:00.6	70.7800	54.0350	0.00	6.98	1500	10000	NUCS	-	AWE-JED	10	837
1973308	11/04/73	03:57:00.0	50.0716	78.9362	0.00		.001	20	NUCS	-	KRR	3	0
1973348	12/14/73	07:46:59.7	50.0540	78.9870	0.00	6.00	20	150	NUCS	-	AWE-JED	11	79
1973365	12/31/73	04:03:00.0	49.7394	78.0863	0.00		.001	20	NUCS	-	KRR	2	0
1974030	01/30/74	04:57:04.6	49.8450	78.0510	0.00	5.40	.001	20	NUCS_SALVO	-	AWE-JED	11	0
1974059	02/28/74	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1974106	04/16/74	05:52:59.8	50.0390	78.9460	0.00	4.90	.001	20	NUCS	-	AWE-JED	8	20
1974136	05/16/74	03:03:00.1	49.7450	78.0530	0.00	5.30	.001	20	NUCS	-	AWE-JED	9	0
1974151	05/31/74	03:27:00.0	49.9530	78.8460	0.00	5.90	20	150	NUCS	-	AWE-JED	11	40
1974176	06/25/74	03:57:00.2	49.8440	78.1110	0.00	4.70	.001	20	NUCS	-	AWE-JED	9	0
1974189	07/08/74	06:00:00.0	53.7000	55.1000	2.12	4.60	10		NUCS	PNE:Kama-1	SULTANOV	7	0
1974191	07/10/74	02:57:00.0	49.7720	78.0880	0.00	5.30	.001	20	NUCS	-	AWE-JED	9	0
1974210	07/29/74	03:28:00.0	49.9375	78.9358	0.00		.001	20	NUCS	-	KRR	3	0
1974226	08/14/74	15:00:00.2	68.9030	75.8230	0.53	5.40	7.6		NUCS	PNE:Horizon-2	SULTANOV	9	60
1974241	08/29/74	09:59:56.2	73.3970	54.9050	0.00	6.58	150	1500	NUCS_SALVO	-	RICHARDS	15	459
1974241	08/29/74	15:00:00.4	67.0850	62.6250	0.58	5.00	7.6		NUCS	PNE:Horizon-1	SULTANOV	9	60
1974256	09/13/74	03:03:00.0	49.7750	78.0360	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	0
1974275	10/02/74	01:00:01.1	66.1000	112.6500	0.10	4.60	1.7		NUCS	PNE:Crystal	SULTANOV	4	0
1974289	10/16/74	06:33:00.1	49.9850	78.8960	0.00	5.50	.001	20	NUCS	-	AWE-JED	11	120
1974306	11/02/74	05:00:00.0	70.8100	53.9100	0.00	6.81	1500	10000	NUCS	-	AWE-JED	10	471
1974332	11/28/74	05:57:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	KRR	2	0
1974341	12/07/74	05:59:59.0	49.9000	77.6500	0.08	4.70	1.7		NUCS	PNE:Lazurite	SULTANOV	10	0
1974350	12/16/74	06:23:00.1	49.7870	78.0920	0.00	5.00	.001	20	NUCS	-	AWE-JED	9	0
1974350	12/16/74	06:41:00.3	49.8580	78.0530	0.00	4.80	3.8		NUCS	PNE	AWE-JED	9	0
1974361	12/27/74	05:46:59.4	49.9490	79.0110	0.00	5.60	20	150	NUCS	-	AWE-JED	11	123
1975051	02/20/75	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS_SALVO	-	RFAE	3	0
1975051	02/20/75	05:33:00.0	49.7810	78.0190	0.00	5.70	.001	20	NUCS	-	AWE-JED	9	68
1975070	03/11/75	05:43:00.1	49.7400	78.1020	0.00	5.40	.001	20	NUCS	-	AWE-JED	9	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1975115	04/25/75	05:00:00.0	47.9090	47.9120	0.60	4.70	.35		NUCS	PNE:Azgir A-2-2	SULTANOV	9	0
1975117	04/27/75	05:36:59.7	49.9550	78.9260	0.00	5.60	20	150	NUCS	-	AWE-JED	11	100
1975159	06/08/75	03:27:00.0	49.7570	78.0080	0.00	5.50	.001	20	NUCS	-	AWE-JED	9	3
1975181	06/30/75	03:26:59.9	50.0010	78.9960	0.00	5.00	.001	20	NUCS	-	AWE-JED	11	60
1975196	07/15/75	02:57:00.0	49.7914	78.0944	0.00		.001	20	NUCS_SALVO	-	KRR	3	0
1975219	08/07/75	03:57:00.1	49.8080	78.1200	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	10	0
1975224	08/12/75	15:00:00.6	70.7630	126.9530	0.50	5.10	7.6		NUCS	PNE:Horizon-4	SULTANOV	7	0
1975235	08/23/75	08:59:58.3	73.3340	54.6820	0.00	6.55	150	1500	NUCS_SALVO	-	RICHARDS	18	425
1975272	09/29/75	11:00:00.4	69.5780	90.3370	0.83	4.80	7.6		NUCS	PNE:Horizon-3	SULTANOV	9	0
1975278	10/05/75	04:27:00.0	49.7831	78.0867	0.00		.001	20	NUCS	-	KRR	6	0
1975291	10/18/75	00:00:00.0	73.0000	55.0000	0.00		150	1500	NUCS_SALVO	-	RFAE	2	12
1975291	10/18/75	08:59:59.4	70.8160	53.7530	0.00	6.75	150	1500	NUCS	-	AWE-JED	10	527
1975294	10/21/75	11:59:58.0	73.3070	55.0100	0.00	6.60	150	1500	NUCS_SALVO	-	RICHARDS	15	238
1975302	10/29/75	04:46:59.8	49.9550	78.8770	0.00	5.80	20	150	NUCS	-	AWE-JED	11	80
1975347	12/13/75	04:57:00.0	49.8060	78.1210	0.00	5.10	.001	20	NUCS	-	AWE-JED	9	0
1975359	12/25/75	05:16:59.7	50.0510	78.8130	0.00	5.80	20	150	NUCS	-	AWE-JED	11	82
1976015	01/15/76	04:47:00.0	49.8170	78.1610	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	10
1976077	03/17/76	02:57:00.0	49.7556	78.0992	0.00		.001	20	NUCS	-	KRR	2	4
1976089	03/29/76	07:00:00.2	47.8970	48.1330	0.99	4.30	10		NUCS	PNE:Azgir A-3-2	SULTANOV	5	0
1976101	04/10/76	05:03:00.0	49.7550	78.0475	0.00		.001	20	NUCS	-	KRR	2	0
1976112	04/21/76	04:58:00.2	49.7730	78.1090	0.00	5.10	.001	20	NUCS	-	AWE-JED	9	231
1976112	04/21/76	05:02:59.7	49.9060	78.8270	0.00	5.30	.001	20	NUCS	-	AWE-JED	11	173
1976140	05/19/76	02:57:00.2	49.7890	78.0190	0.00	5.00	.001	20	NUCS	-	AWE-JED	9	18
1976161	06/09/76	03:02:59.8	50.0020	79.0250	0.00	5.40	.001	20	NUCS	-	AWE-JED	11	80
1976186	07/04/76	02:56:59.9	49.9120	78.9080	0.00	5.80	20	150	NUCS	-	AWE-JED	11	106
1976205	07/23/76	02:33:00.2	49.7740	78.0460	0.00	5.10	.001	20	NUCS	-	AWE-JED	9	18
1976211	07/29/76	05:00:00.5	47.8700	48.1500	1.00	5.90	58		NUCS	PNE:Azgir A-4	SULTANOV	9	56
1976217	08/04/76	02:57:00.0	49.8700	77.7000	0.00		.001	20	NUCS	-	KRR	6	18
1976241	08/28/76	02:57:00.0	49.9790	78.9280	0.00	5.80	20	150	NUCS	-	AWE-JED	11	107
1976273	09/29/76	02:59:57.7	73.3600	54.8710	0.00	5.83	20	150	NUCS_SALVO	-	RICHARDS	12	357

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1976294	10/20/76	07:59:58.1	73.3980	54.8120	0.00	5.10	.001	20	NUCS_SALVO	-	RICHARDS	14	182
1976304	10/30/76	04:57:00.2	49.8250	78.0220	0.00	4.90	.001	20	NUCS	-	AWE-JED	8	32
1976310	11/05/76	04:00:00.0	61.4580	112.8600	1.52	5.30	15		NUCS	PNE:Oka	SULTANOV	9	88
1976328	11/23/76	05:02:59.8	50.0130	78.9620	0.00	5.90	20	150	NUCS	-	AWE-JED	11	112
1976342	12/07/76	00:00:00.0	50.0000	78.0000	0.00		20	150	NUCS_SALVO	-	RFAE	3	2
1976342	12/07/76	04:56:59.9	49.9270	78.8470	0.00	5.90	.001	20	NUCS	-	AWE-JED	11	80
1976365	12/30/76	03:57:00.3	49.7950	78.0300	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	10	54
1977088	03/29/77	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS_SALVO	-	RFAE	3	3
1977088	03/29/77	03:57:00.0	49.7810	78.0420	0.00	5.40	20	150	NUCS	-	AWE-JED	9	104
1977115	04/25/77	04:07:00.2	49.8110	78.1070	0.00	5.10	.001	20	NUCS	-	AWE-JED	9	37
1977149	05/29/77	02:57:00.0	49.9320	78.7740	0.00	5.80	20	150	NUCS	-	AWE-JED	11	165
1977180	06/29/77	03:07:00.4	50.0330	78.8610	0.00	5.30	.001	20	NUCS	-	AWE-JED	11	228
1977207	07/26/77	17:00:00.2	69.5750	90.3750	0.85	5.00	15		NUCS	PNE:Meteorite-2	SULTANOV	9	71
1977211	07/30/77	01:57:00.1	49.7540	78.0570	0.00	5.30	.001	20	NUCS_SALVO	-	AWE-JED	10	129
1977222	08/10/77	22:00:00.1	50.9550	110.9830	0.49	5.00	8.5		NUCS	PNE:Meteorite-5	SULTANOV	8	125
1977229	08/17/77	04:27:00.0	49.8170	78.1280	0.00	5.10	.001	20	NUCS	-	AWE-JED	9	95
1977232	08/20/77	22:00:00.8	64.1080	99.5580	0.60	5.00	8.5		NUCS	PNE:Meteorite-3	SULTANOV	9	119
1977244	09/01/77	02:59:58.0	73.3390	54.6190	0.00	5.71	20	150	NUCS_SALVO	-	RICHARDS	14	153
1977248	09/05/77	03:02:59.9	50.0480	78.9230	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	12	235
1977253	09/10/77	16:00:00.2	57.2510	106.5510	0.55	4.80	7.6		NUCS	PNE:Meteorite-4	SULTANOV	8	123
1977273	09/30/77	06:59:58.4	47.8970	48.1610	1.50	5.00	10		NUCS	PNE:Azgir A-5	SULTANOV	9	104
1977282	10/09/77	10:59:58.1	73.4090	54.9270	0.00	4.60	.001	20	NUCS	-	RICHARDS	11	179
1977287	10/14/77	06:59:59.1	47.9090	47.9120	0.60		.1		NUCS	PNE:Azgir A-2-3	SULTANOV	5	3
1977302	10/29/77	03:07:00.0	49.8270	78.0910	0.00	5.60	.001	20	NUCS_SALVO	-	AWE-JED	10	153
1977302	10/29/77	03:07:04.9	50.0680	78.9770	0.00	5.60	20	150	NUCS	-	AWE-JED	11	153
1977303	10/30/77	06:59:59.1	47.9090	47.9120	0.60		.1		NUCS	PNE:Azgir A-2-4	SULTANOV	3	0
1977316	11/12/77	05:11:00.0	50.0522	78.8644	0.00		.001	20	NUCS	-	KRR	3	0
1977331	11/27/77	03:57:00.0	49.7544	78.0503	0.00		.001	20	NUCS	-	KRR	2	0
1977334	11/30/77	04:06:59.9	49.9660	78.8900	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	76
1977360	12/26/77	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS_SALVO	-	RFAE	4	4

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1977360	12/26/77	04:03:00.2	49.8430	78.0700	0.00	4.90	.001	20	NUCS	-	AWE-JED	9	32
1978078	03/19/78	03:46:59.8	49.9450	77.7040	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	163
1978085	03/26/78	03:57:00.0	49.7660	78.0080	0.00	5.60	.001	20	NUCS_SALVO	-	AWE-JED	10	237
1978112	04/22/78	03:07:00.0	49.7560	78.1400	0.00	5.30	.001	20	NUCS_SALVO	-	AWE-JED	11	269
1978144	05/24/78	00:00:00.0	50.0000	78.0000	0.00	0	.001	NUCS	-	RFAE	1	0	
1978149	05/29/78	04:56:59.9	49.7620	78.0920	0.00	4.70	.001	20	NUCS	-	AWE-JED	9	40
1978153	06/02/78	00:00:00.0	50.0000	78.0000	0.00	0	.001	NUCS	-	RFAE	1	0	
1978162	06/11/78	02:57:00.1	49.9030	78.7910	0.00	5.90	20	150	NUCS	-	AWE-JED	11	272
1978186	07/05/78	02:47:00.0	49.8960	78.8680	0.00	5.80	20	150	NUCS	-	AWE-JED	11	272
1978209	07/28/78	02:46:59.9	49.7520	78.1000	0.00	5.70	20	150	NUCS_SALVO	-	AWE-JED	13	254
1978221	08/09/78	18:00:00.8	63.6780	125.5220	0.57	5.60	22	NUCS	PNE:Kraton-4	SULTANOV	10	133	
1978222	08/10/78	07:59:57.9	73.2910	54.8830	0.00	6.04	20	150	NUCS_SALVO	-	RICHARDS	16	228
1978236	08/24/78	18:00:00.4	65.9250	112.3380	0.58	5.10	22	NUCS	PNE:Kraton-3	SULTANOV	10	74	
1978241	08/29/78	02:37:00.0	49.8070	78.1070	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	11	220
1978241	08/29/78	02:37:08.8	50.0110	78.9760	0.00	5.90	20	150	NUCS	-	AWE-JED	11	225
1978255	09/12/78	04:59:58.5	47.9090	47.9120	0.60	.08	NUCS	PNE:Azgir A-2-5	SULTANOV	3	0		
1978258	09/15/78	02:36:59.9	49.9220	78.8760	0.00	6.00	20	150	NUCS	-	AWE-JED	11	257
1978263	09/20/78	05:03:00.0	49.8480	78.2120	0.00	4.30	.001	10	NUCS	-	AWE-JED	7	0
1978264	09/21/78	15:00:00.2	66.5980	86.2100	0.89	5.20	15	NUCS	PNE:Kraton-2	SULTANOV	9	73	
1978270	09/27/78	02:04:58.6	73.3490	54.6760	0.00	5.63	20	150	NUCS_SALVO	-	RICHARDS	16	118
1978281	10/08/78	00:00:00.0	61.5500	112.8500	1.55	5.20	15	NUCS	PNE:Vyatka	SULTANOV	10	53	
1978288	10/15/78	05:37:00.1	49.7460	78.1210	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	125
1978290	10/17/78	04:59:59.1	47.8500	48.1200	1.04	5.80	20	150	NUCS_SALVO	PNE:Azgir A-7	SULTANOV	10	116
1978290	10/17/78	14:00:00.2	63.1850	63.4320	0.59	5.50	22	NUCS	PNE:Kraton-1	SULTANOV	9	75	
1978304	10/31/78	04:17:00.2	49.8030	78.0990	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	135
1978308	11/04/78	05:05:59.8	50.0400	78.9410	0.00	5.60	20	150	NUCS_SALVO	-	AWE-JED	12	143
1978333	11/29/78	04:33:00.2	49.8080	77.9990	0.00	5.30	20	150	NUCS_SALVO	-	AWE-JED	10	184
1978333	11/29/78	04:33:05.0	49.9590	78.8010	0.00	6.00	.001	20	NUCS	-	AWE-JED	11	184
1978334	11/30/78	07:59:59.1	47.9090	47.9120	0.60	.006	NUCS	PNE:Azgir A-2-6	SULTANOV	3	0		
1978348	12/14/78	04:43:00.0	49.8050	78.1030	0.00	4.80	.001	20	NUCS	-	AWE-JED	9	41

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1978352	12/18/78	07:59:58.5	47.8600	48.1600	0.63	5.90	103		NUCS	PNE:Azgir A-9	SULTANOV	9	61
1978354	12/20/78	04:33:00.0	49.8500	78.0470	0.00	4.70	.001	20	NUCS_SALVO	-	AWE-JED	10	45
1979010	01/10/79	08:00:00.0	47.9090	47.9120	0.60		.5		NUCS	PNE:Azgir A-2-7	SULTANOV	6	0
1979017	01/17/79	07:59:58.5	47.9200	48.1200	1.00	6.00	20	150	NUCS_SALVO	PNE:Azgir A-8	SULTANOV	10	124
1979032	02/01/79	04:13:00.2	50.1010	78.8630	0.00	5.40	.001	20	NUCS	-	AWE-JED	11	105
1979047	02/16/79	04:04:00.5	49.9740	77.6680	0.00	5.40	.001	20	NUCS_SALVO	-	AWE-JED	10	54
1979082	03/23/79	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1979100	04/10/79	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1979126	05/06/79	03:17:00.1	49.7700	78.0080	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	10	134
1979151	05/31/79	05:55:00.1	49.8300	78.0870	0.00	5.30	.001	20	NUCS_SALVO	-	AWE-JED	12	134
1979163	06/12/79	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1979174	06/23/79	02:57:00.0	49.9130	78.8570	0.00	6.30	20	150	NUCS	-	AWE-JED	11	215
1979188	07/07/79	03:46:59.8	50.0320	78.9890	0.00	5.80	20	150	NUCS_SALVO	-	AWE-JED	12	250
1979195	07/14/79	04:59:58.0	47.8800	48.1200	0.98	5.60	.001	20	NUCS_SALVO	PNE:Azgir A-11	SULTANOV	11	161
1979199	07/18/79	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	1
1979199	07/18/79	03:17:04.9	49.9190	77.8120	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	42
1979216	08/04/79	03:56:59.6	49.9000	78.9000	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	12	267
1979224	08/12/79	18:00:00.2	61.8030	122.4300	0.98	4.90	8.5		NUCS	PNE:Kimberlite-4	SULTANOV	10	77
1979230	08/18/79	02:51:59.6	49.9490	78.9370	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	12	145
1979249	09/06/79	18:00:00.3	64.1100	99.5620	0.60	4.90	8.5		NUCS	PNE:Kimberlite-3	SULTANOV	9	73
1979259	09/16/79	09:00:00.0	48.2000	38.3000	0.90		.3		NUCS	PNE:Cleavage	SULTANOV	5	0
1979267	09/24/79	03:29:58.8	73.3430	54.6720	0.00	5.80	20	150	NUCS_SALVO	-	RICHARDS	13	168
1979270	09/27/79	04:13:00.0	49.7570	78.0970	0.00	4.50	.001	20	NUCS	-	AWE-JED	9	50
1979277	10/04/79	16:00:00.0	60.6750	71.4550	0.84	5.40	22		NUCS	PNE:Kimberlite-1	SULTANOV	9	75
1979280	10/07/79	21:00:00.2	61.8500	113.1000	1.55	5.00	15		NUCS	PNE:Sheksna	SULTANOV	10	135
1979291	10/18/79	04:17:00.1	49.8290	78.1040	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	10	132
1979291	10/18/79	07:09:58.8	73.3160	54.8160	0.00	5.85	20	150	NUCS_SALVO	-	RICHARDS	14	241
1979297	10/24/79	05:59:59.0	47.8500	48.1400	0.85	5.80	20	150	NUCS_SALVO	PNE:Azgir A-10	SULTANOV	10	106
1979301	10/28/79	03:16:59.5	49.9820	78.9960	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	261
1979334	11/30/79	04:53:00.6	49.7810	78.1040	0.00	4.50	.001	20	NUCS	-	AWE-JED	9	48

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1979336	12/02/79	04:37:00.0	49.9000	78.7930	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	248
1979355	12/21/79	04:42:00.1	49.7950	78.1270	0.00	4.70	.001	20	NUCS	-	AWE-JED	9	51
1979357	12/23/79	04:56:59.9	49.9200	78.7530	0.00	6.20	20	150	NUCS_SALVO	-	AWE-JED	12	126
1980074	03/14/80	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1980095	04/04/80	05:32:59.8	50.0000	77.8230	0.00	4.90	.001	20	NUCS	-	AWE-JED	9	60
1980101	04/10/80	04:07:00.2	49.7960	78.0680	0.00	5.00	.001	20	NUCS_SALVO	-	AWE-JED	10	58
1980116	04/25/80	03:57:00.0	49.9810	78.7560	0.00	5.50	0	20	NUCS_SALVO	-	AWE-JED	12	114
1980143	05/22/80	03:57:00.1	49.7800	78.0370	0.00	5.50	.001	20	NUCS_SALVO	-	AWE-JED	12	124
1980164	06/12/80	03:27:00.1	49.9860	78.9980	0.00	5.60	20	150	NUCS	-	AWE-JED	11	103
1980168	06/16/80	06:00:00.0	52.9000	56.5000	1.40		3.2		NUCS	PNE:Butane 2-1	SULTANOV	2	0
1980177	06/25/80	02:27:00.0	49.8258	78.0994	0.00		.001	20	NUCS	-	KRR	2	0
1980177	06/25/80	06:00:00.0	52.9000	56.5000	1.39		3.2		NUCS	PNE:Butane 2-2	SULTANOV	2	0
1980181	06/29/80	02:33:00.2	49.9510	78.8150	0.00	5.70	20	150	NUCS_SALVO	-	AWE-JED	13	237
1980213	07/31/80	03:33:00.1	49.8030	78.1050	0.00	5.30	.001	20	NUCS_SALVO	-	AWE-JED	10	141
1980258	09/14/80	02:42:41.6	49.9300	78.8010	0.00	6.20	20	150	NUCS	-	AWE-JED	11	210
1980269	09/25/80	06:21:13.1	49.8260	78.0710	0.00	4.70	.001	20	NUCS	-	AWE-JED	9	115
1980282	10/08/80	06:00:00.3	46.7570	48.2750	1.05	5.20	8.5		NUCS	PNE:Vega-1	SULTANOV	9	142
1980285	10/11/80	07:09:57.5	73.3360	54.9400	0.00	5.80	20	150	NUCS_SALVO	-	RICHARDS	17	272
1980286	10/12/80	03:34:16.6	49.9670	79.0260	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	12	282
1980297	10/23/80	03:57:11.0	49.7517	78.1317	0.00		.001	20	NUCS	-	KRR	2	0
1980306	11/01/80	13:00:00.4	60.8000	97.5500	0.72	5.20	8		NUCS	PNE:Batholith-1	SULTANOV	10	79
1980340	12/05/80	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS	-	RFAE	1	0
1980340	12/05/80	04:17:16.0	49.7517	78.1317	0.00		.001	20	NUCS_SALVO	-	KRR	4	0
1980345	12/10/80	07:00:00.1	61.7500	66.7500	2.49	4.60	15		NUCS	PNE:Angara	SULTANOV	9	56
1980349	12/14/80	03:47:08.9	49.9090	78.9320	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	13	291
1980361	12/26/80	04:07:09.3	49.8630	78.1190	0.00	4.50	.001	20	NUCS	-	AWE-JED	9	60
1980362	12/27/80	04:09:10.6	50.0630	78.9820	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	12	258
1981084	03/25/81	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1981088	03/29/81	04:03:52.5	50.0110	78.9780	0.00	5.60	.001	20	NUCS_SALVO	-	AWE-JED	13	164
1981112	04/22/81	01:17:13.8	49.8910	78.8110	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	13	240

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1981145	05/25/81	05:00:00.3	68.2000	53.5000	1.51	5.50	37.6		NUCS	PNE:Pyrite	SULTANOV	9	88
1981147	05/27/81	03:58:14.8	49.9920	78.9790	0.00	5.50	.001	20	NUCS	-	AWE-JED	11	128
1981155	06/04/81	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1981181	06/30/81	01:57:15.3	49.7610	78.0710	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	10	72
1981198	07/17/81	02:37:18.1	49.8000	78.1260	0.00	5.20	.001	20	NUCS	-	AWE-JED	9	77
1981226	08/14/81	02:27:15.2	49.7810	78.0770	0.00	5.00	.001	20	NUCS_SALVO	-	AWE-JED	11	125
1981245	09/02/81	04:00:00.0	60.6000	55.7000	2.09	4.40	3.2		NUCS	PNE:Helium-1	SULTANOV	9	44
1981256	09/13/81	02:17:20.8	49.9200	78.9110	0.00	6.10	20	150	NUCS	-	AWE-JED	11	183
1981269	09/26/81	05:00:00.3	46.7900	48.3130	1.05	5.20	8.5		NUCS	PNE:Vega 2-1	SULTANOV	9	235
1981269	09/26/81	05:03:59.9	46.7710	48.3040	1.05	5.30	8.5		NUCS	PNE:Vega 2-2	SULTANOV	8	173
1981274	10/01/81	12:14:57.2	73.3040	54.8180	0.00	6.00	20	150	NUCS_SALVO	-	RICHARDS	14	229
1981289	10/16/81	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1981291	10/18/81	03:57:05.1	49.9270	78.8540	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	12	259
1981295	10/22/81	14:00:00.4	63.8000	97.5500	0.58	5.10	8.5		NUCS	PNE:Shpat-2	SULTANOV	9	68
1981324	11/20/81	04:57:05.1	49.7460	78.1200	0.00	5.10	.001	20	NUCS_SALVO	-	AWE-JED	10	89
1981333	11/29/81	03:35:11.1	49.8980	78.8570	0.00	5.70	.001	20	NUCS_SALVO	-	AWE-JED	13	224
1981356	12/22/81	04:31:05.3	49.8210	78.1070	0.00	5.10	.001	20	NUCS_SALVO	-	AWE-JED	11	83
1981361	12/27/81	03:43:16.6	49.9300	78.7920	0.00	6.20	20	150	NUCS	-	AWE-JED	11	245
1982050	02/19/82	03:56:13.4	49.8060	78.0290	0.00	5.40	.001	20	NUCS_SALVO	-	AWE-JED	10	168
1982115	04/25/82	03:23:07.9	49.9120	78.9060	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	13	139
1982176	06/25/82	02:03:07.2	49.8010	78.0890	0.00	4.90	.001	20	NUCS_SALVO	-	AWE-JED	10	144
1982185	07/04/82	01:17:16.7	49.9580	78.8000	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	13	198
1982211	07/30/82	21:00:00.0	53.8000	104.1500	0.55	5.00	8.5		NUCS	PNE:Rift-3	SULTANOV	10	228
1982235	08/23/82	02:43:06.7	49.7580	78.0440	0.00	4.70	.001	20	NUCS_SALVO	-	AWE-JED	10	140
1982243	08/31/82	01:31:03.2	49.9260	78.7600	0.00	5.40	.001	20	NUCS_SALVO	-	AWE-JED	12	185
1982247	09/04/82	18:00:00.1	69.2000	81.6500	0.96	5.30	16		NUCS	PNE:Rift-1	SULTANOV	9	206
1982264	09/21/82	02:57:03.2	49.7850	78.1210	0.00	5.20	.001	20	NUCS_SALVO	-	AWE-JED	10	94
1982268	09/25/82	18:00:00.2	64.3500	91.8000	0.55	5.20	8.5		NUCS	PNE:Rift-4	SULTANOV	9	182
1982283	10/10/82	05:00:00.2	61.5500	112.8500	1.50	5.30	15		NUCS	PNE:Neva-1	SULTANOV	10	196
1982284	10/11/82	07:14:58.6	73.3390	54.6080	0.00	5.60	20	150	NUCS_SALVO	-	RICHARDS	14	324

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1982289	10/16/82	06:00:00.2	46.7590	48.2470	0.95	5.20	13.5		NUCS	PNE:Vega 3-1	SULTANOV	9	613
1982289	10/16/82	06:05:00.1	46.7520	48.2580	0.99	5.20	8.5		NUCS	PNE:Vega 3-2	SULTANOV	9	641
1982289	10/16/82	06:10:00.1	46.7660	48.2880	1.10	5.20	8.5		NUCS	PNE:Vega 3-3	SULTANOV	9	649
1982289	10/16/82	06:15:00.2	46.7600	48.3000	1.06	5.40	8.5		NUCS	PNE:Vega 3-4	SULTANOV	9	583
1982339	12/05/82	03:37:15.0	49.9240	78.8120	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	12	243
1982359	12/25/82	04:23:08.4	49.7990	78.0370	0.00	4.80	.001	20	NUCS_SALVO	-	AWE-JED	10	161
1982360	12/26/82	03:35:16.7	50.0780	78.9860	0.00	5.70	20	150	NUCS_SALVO	-	AWE-JED	12	198
1983070	03/11/83	00:00:00.0	50.0000	78.0000	0.00		0	.001	NUCS	-	RFAE	1	0
1983089	03/30/83	04:17:10.2	49.7920	78.0290	0.00	4.90	.001	20	NUCS	-	AWE-JED	7	0
1983102	04/12/83	03:41:08.3	49.8150	78.0760	0.00	4.90	.001	20	NUCS	-	AWE-JED	8	160
1983150	05/30/83	03:33:47.0	49.7360	78.1200	0.00	5.50	.001	20	NUCS_SALVO	-	AWE-JED	9	144
1983163	06/12/83	02:36:46.0	49.9200	78.9140	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	11	146
1983175	06/24/83	02:56:13.9	49.7570	78.0390	0.00	4.70	.001	20	NUCS	-	AWE-JED	8	111
1983191	07/10/83	04:00:00.0	51.3630	53.3060	0.91	5.30	15		NUCS	PNE:Lira 1-1	SULTANOV	8	337
1983191	07/10/83	04:04:59.9	51.3670	53.3270	0.92	5.30	15		NUCS	PNE:Lira 1-2	SULTANOV	8	357
1983191	07/10/83	04:09:59.9	51.3800	53.3400	0.84	5.30	15		NUCS	PNE:Lira 1-3	SULTANOV	9	386
1983230	08/18/83	16:09:58.9	73.3540	54.9740	0.00	5.91	20	150	NUCS_SALVO	-	RICHARDS	14	291
1983254	09/11/83	06:33:13.1	49.8200	78.1180	0.00	4.90	.001	20	NUCS	-	AWE-JED	8	181
1983267	09/24/83	05:00:00.0	46.7830	48.3150	1.05	5.20	8.5		NUCS	PNE:Vega 4-1	SULTANOV	9	756
1983267	09/24/83	05:05:00.0	46.7880	48.2970	1.05	5.10	8.5		NUCS	PNE:Vega 4-2	SULTANOV	9	784
1983267	09/24/83	05:10:00.1	46.7670	48.3100	0.92	5.00	8.5		NUCS	PNE:Vega 4-3	SULTANOV	9	805
1983267	09/24/83	05:15:00.1	46.7490	48.3030	1.10	5.20	8.5		NUCS	PNE:Vega 4-4	SULTANOV	8	818
1983267	09/24/83	05:19:59.9	46.7540	48.2890	0.95	5.40	8.5		NUCS	PNE:Vega 4-5	SULTANOV	9	809
1983267	09/24/83	05:25:00.0	46.7660	48.2740	1.10	5.30	8.5		NUCS	PNE:Vega 4-6	SULTANOV	9	766
1983268	09/25/83	13:09:58.2	73.3280	54.5410	0.00	5.80	20	150	NUCS_SALVO	-	RICHARDS	13	324
1983279	10/06/83	01:47:09.1	49.9240	78.7610	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	131
1983299	10/26/83	01:55:07.3	49.9120	78.8280	0.00	6.10	20	150	NUCS	-	AWE-JED	11	184
1983306	11/02/83	04:18:54.0	49.7792	78.1247	0.00		.001	20	NUCS	-	KRR	2	0
1983324	11/20/83	03:27:06.9	50.0550	78.9970	0.00	5.50	.001	20	NUCS_SALVO	-	AWE-JED	11	115
1983333	11/29/83	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS_SALVO	-	RFAE	2	12

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1983333	11/29/83	02:19:08.8	49.7390	78.1050	0.00	5.40	.001	20	NUCS	-	AWE-JED	9	172
1983360	12/26/83	04:29:09.3	49.8040	78.0980	0.00	5.60	.001	20	NUCS	-	AWE-JED	9	122
1984050	02/19/84	03:57:05.9	49.8940	78.7450	0.00	5.90	20	150	NUCS	-	AWE-JED	11	209
1984067	03/07/84	02:39:08.8	50.0490	78.9500	0.00	5.70	20	150	NUCS	-	AWE-JED	11	160
1984089	03/29/84	05:19:10.7	49.9220	78.9490	0.00	5.90	20	150	NUCS	-	AWE-JED	11	166
1984106	04/15/84	03:17:11.5	49.7490	78.1010	0.00	5.70	20	150	NUCS_SALVO	-	AWE-JED	10	170
1984116	04/25/84	01:09:06.0	49.9350	78.8670	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	208
1984147	05/26/84	03:13:14.9	49.9730	79.0000	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	11	267
1984196	07/14/84	01:09:13.0	49.9010	78.8790	0.00	6.20	20	150	NUCS_SALVO	-	AWE-JED	12	192
1984203	07/21/84	02:59:59.8	51.3580	53.3190	0.85	5.40	15		NUCS	PNE:Lira 2-1	SULTANOV	9	303
1984203	07/21/84	03:04:59.7	51.3710	53.3370	0.96	5.30	15		NUCS	PNE:Lira 2-2	SULTANOV	8	312
1984203	07/21/84	03:09:59.9	51.3910	53.3510	0.84	5.40	15		NUCS	PNE:Lira 2-3	SULTANOV	8	318
1984224	08/11/84	19:00:00.2	65.0500	55.1000	0.76	5.30	85		NUCS	PNE:Quartz-2	SULTANOV	9	305
1984238	08/25/84	19:00:00.3	61.9000	72.1000	0.73	5.30	8.5		NUCS	PNE:Quartz-3	SULTANOV	8	337
1984239	08/26/84	00:00:00.0	73.0000	55.0000	0.00	3.80	.001	20	NUCS	-	RFAE	2	66
1984240	08/27/84	06:00:00.1	67.7500	33.0000	0.18	4.70	1.7		NUCS_SALVO	PNE:Dnepr-2	SULTANOV	9	264
1984241	08/28/84	02:59:59.8	60.3000	57.1000	2.07	4.40	3.2		NUCS	PNE:Helium 2-1	SULTANOV	8	351
1984241	08/28/84	03:04:59.9	60.7000	57.5000	2.08	4.40	3.2		NUCS	PNE:Helium 2-2	SULTANOV	9	404
1984253	09/09/84	02:59:08.9	49.8090	78.0720	0.00	5.10	.001	20	NUCS_SALVO	-	AWE-JED	12	539
1984261	09/17/84	21:00:00.0	55.8340	87.5260	0.56	5.00	10		NUCS	PNE:Quartz-4	SULTANOV	9	115
1984292	10/18/84	04:57:08.3	49.7750	78.1330	0.00	4.50	.001	20	NUCS	-	AWE-JED	9	154
1984299	10/25/84	06:29:58.1	73.3550	54.9900	0.00	5.90	20	150	NUCS_SALVO	-	RICHARDS	14	398
1984301	10/27/84	01:50:12.9	49.9250	78.7760	0.00	6.20	20	150	NUCS	-	AWE-JED	11	299
1984301	10/27/84	06:00:00.1	46.9000	48.1500	1.00	5.00	3.2		NUCS	PNE:Vega 5-1	SULTANOV	9	247
1984301	10/27/84	06:05:00.0	46.9500	48.1000	1.00	5.00	3.2		NUCS	PNE:Vega 5-2	SULTANOV	9	240
1984328	11/23/84	03:55:07.5	49.8300	78.0730	0.00	4.70	.001	20	NUCS_SALVO	-	AWE-JED	11	849
1984337	12/02/84	03:19:08.9	49.9930	79.0090	0.00	5.90	20	150	NUCS	-	AWE-JED	11	247
1984351	12/16/84	03:55:05.1	49.9300	78.8160	0.00	6.10	.001	20	NUCS	-	AWE-JED	11	250
1984363	12/28/84	03:50:13.1	49.8750	78.7000	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	263
1985041	02/10/85	03:27:10.0	49.8930	78.7830	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	13	290

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1985115	04/25/85	00:57:09.0	49.9210	78.8990	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	12	250
1985166	06/15/85	00:57:03.1	49.9030	78.8390	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	14	225
1985169	06/18/85	04:00:00.1	60.6000	72.7000	2.86		2.5		NUCS	PNE:Benzene	SULTANOV	2	0
1985181	06/30/85	02:39:05.1	49.8570	78.6590	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	12	281
1985192	07/11/85	02:57:02.0	49.7506	78.0492	0.00		.001	20	NUCS	-	KRR	4	247
1985199	07/18/85	21:15:00.3	65.9940	41.0380	0.77	5.10	8.5		NUCS	PNE:Agate	SULTANOV	9	284
1985200	07/19/85	04:00:08.0	49.8011	78.0686	0.00		.001	20	NUCS	-	KRR	2	0
1985201	07/20/85	00:53:16.9	49.9430	78.7830	0.00	6.00	20	150	NUCS	-	AWE-JED	11	274
1985206	07/25/85	03:11:09.2	49.8360	77.9980	0.00	5.00	.001	20	NUCS_SALVO	-	AWE-JED	12	318
1987057	02/26/87	04:58:24.3	49.8440	78.0880	0.00	5.40	.001	20	NUCS	-	AWE-JED	11	154
1987071	03/12/87	01:57:19.6	49.9290	78.8240	0.00	5.60	.001	20	NUCS_SALVO	-	AWE-JED	14	235
1987093	04/03/87	00:00:00.0	50.0000	78.0000	0.00		.001	20	NUCS_SALVO	-	RFAE	3	6
1987093	04/03/87	01:17:10.3	49.9100	78.7860	0.00	6.20	20	150	NUCS	-	AWE-JED	13	259
1987107	04/17/87	01:03:07.1	49.8740	78.6630	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	15	190
1987109	04/19/87	04:00:00.0	60.6000	57.2000	2.02	4.50	3.2		NUCS	PNE:Helium 3-1	SULTANOV	10	235
1987109	04/19/87	04:05:00.0	60.8000	57.5000	2.06	4.50	3.2		NUCS	PNE:Helium 3-2	SULTANOV	10	302
1987126	05/06/87	04:02:08.1	49.7770	77.9840	0.00	5.60	.001	20	NUCS	-	AWE-JED	10	313
1987157	06/06/87	02:37:09.3	49.8370	78.0650	0.00	5.40	.001	20	NUCS	-	AWE-JED	11	161
1987171	06/20/87	00:53:07.1	49.9270	78.7400	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	14	300
1987188	07/07/87	00:00:00.0	61.5000	112.8500	1.50	5.10	15		NUCS	PNE:Neva 2-1	SULTANOV	12	133
1987198	07/17/87	01:17:09.2	49.7690	78.0350	0.00	5.80	20	150	NUCS	-	AWE-JED	11	240
1987205	07/24/87	02:00:00.0	61.4500	112.8000	1.52	5.10	15		NUCS	PNE:Neva 2-2	SULTANOV	12	185
1987214	08/02/87	00:58:09.2	49.8770	78.8730	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	15	346
1987214	08/02/87	02:00:00.2	73.3260	54.6020	0.00	5.82	20	150	NUCS_SALVO	-	RICHARDS	16	424
1987224	08/12/87	01:30:00.5	61.4500	112.8000	0.82	5.00	3.2		NUCS	PNE:Neva 2-3	SULTANOV	12	208
1987261	09/18/87	02:32:10.0	49.9760	78.0240	0.00	4.30	.001	20	NUCS_SALVO	-	AWE-JED	11	133
1987276	10/03/87	15:15:00.0	47.6000	56.2000	1.00	5.30	8.5		NUCS	PNE:Batholith-2	SULTANOV	10	218
1987289	10/16/87	06:06:07.0	49.8020	78.1400	0.00	4.60	.001	20	NUCS	-	AWE-JED	9	135
1987319	11/15/87	03:31:09.1	49.8810	78.7530	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	14	282
1987347	12/13/87	03:21:07.2	49.9570	78.7920	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	15	252

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1987354	12/20/87	02:55:09.1	49.7740	77.9750	0.00	4.80	.001	20	NUCS	-	AWE-JED	11	121
1987361	12/27/87	03:05:07.2	49.8670	78.7180	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	14	216
1988037	02/06/88	04:19:09.1	49.7870	77.9750	0.00	4.80	.001	20	NUCS_SALVO	-	AWE-JED	10	179
1988044	02/13/88	03:05:08.2	49.9320	78.8780	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	11	371
1988094	04/03/88	01:33:08.1	49.9090	78.9180	0.00	6.10	20	150	NUCS	-	AWE-JED	9	301
1988113	04/22/88	09:30:09.4	49.8240	78.1020	0.00	4.90	.001	20	NUCS	-	AWE-JED	8	158
1988125	05/04/88	00:57:09.1	49.9310	78.7410	0.00	6.10	20	150	NUCS	-	AWE-JED	10	222
1988128	05/07/88	22:49:58.3	73.3140	54.5530	0.00	5.60	20	150	NUCS_SALVO	-	RICHARDS	12	372
1988166	06/14/88	02:27:09.0	50.0340	78.9640	0.00	5.10	.001	20	NUCS	-	AWE-JED	10	125
1988235	08/22/88	16:20:00.1	66.2800	78.4910	0.83	5.30	15		NUCS	PNE:Ruby-2	SULTANOV	8	137
1988250	09/06/88	16:19:59.9	61.3610	48.0920	0.82	4.80	8.5		NUCS	PNE:Ruby-1	SULTANOV	8	73
1988258	09/14/88	04:00:00.0	49.8788	78.8225	0.00	6.10	20	150	NUCS	shagan/jve	MURPHY+JENAB	12	378
1988292	10/18/88	03:40:09.2	49.8020	78.0020	0.00	4.90	.001	20	NUCS	-	AWE-JED	8	155
1988317	11/12/88	03:30:06.3	50.0480	78.9600	0.00	5.40	.001	20	NUCS	-	AWE-JED	11	262
1988328	11/23/88	03:57:09.0	49.7650	78.0290	0.00	5.40	.001	20	NUCS_SALVO	-	AWE-JED	11	218
1988339	12/04/88	05:19:53.3	73.3660	55.0010	0.00	5.90	20	150	NUCS_SALVO	-	RICHARDS	15	523
1988352	12/17/88	04:18:09.2	49.8790	78.9240	0.00	5.90	20	150	NUCS_SALVO	-	AWE-JED	12	368
1988363	12/28/88	05:28:10.0	49.8011	78.0686	0.00		.001	20	NUCS_SALVO	-	KRR	6	224
1989022	01/22/89	03:57:09.0	49.9340	78.8150	0.00	6.10	20	150	NUCS_SALVO	-	AWE-JED	12	275
1989043	02/12/89	04:15:09.2	49.9110	78.7040	0.00	5.90	20	150	NUCS	-	AWE-JED	12	337
1989048	02/17/89	04:01:09.2	49.8490	78.0640	0.00	5.10	.001	20	NUCS	-	AWE-JED	10	194
1989189	07/08/89	03:47:00.0	49.8690	78.7750	0.00	5.60	20	150	NUCS	-	AWE-JED	11	505
1989245	09/02/89	04:16:59.9	50.0190	78.9980	0.00	5.10	.001	20	NUCS	-	AWE-JED	11	344
1989277	10/04/89	11:30:00.2	49.7510	78.0050	0.00	4.70	.001	20	NUCS	-	AWE-JED	8	0
1989292	10/19/89	09:49:59.8	49.9270	78.9270	0.00	6.00	20	150	NUCS_SALVO	-	AWE-JED	13	454
1990297	10/24/90	14:57:58.5	73.3310	54.7570	0.00	5.70	20	150	NUCS_SALVO	-	RICHARDS	17	665

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1945197	07/16/45	11:29:21.0	33.6753	-106.4747	-0.03		21		NACU	Trinity	G+P	7	0
1945217	08/05/45	23:16:02.0	34.2200	132.2500	0.00		15		NACU	littleboy	TCARTER	5	0
1945221	08/09/45	01:58:00.0	32.4800	129.5300	0.00		21		NACU	fatman	TCARTER	5	0
1946181	06/30/46	21:01:00.0	11.0000	165.0000	-0.16		21		NACU	Able	G+P	5	0
1946205	07/24/46	21:34:59.8	11.5833	165.5000	0.00		21		NWCU	Baker	G+R	8	0
1948105	04/14/48	18:16:59.0	11.0000	162.0000	-0.06		37		NACU	X-ray	G+P	5	0
1948121	04/30/48	18:08:59.0	11.0000	162.0000	-0.06		49		NACU	Yoke	G+P	5	0
1948135	05/14/48	18:04:00.0	11.0000	162.0000	-0.06		18		NACU	Zebra	G+P	5	0
1951027	01/27/51	13:44:51.0	36.8000	-115.9500	-0.32		1		NACU	Able	G+P	5	0
1951028	01/28/51	13:52:04.5	36.8000	-115.9500	-0.33		8		NACU	Baker	G+P	5	0
1951032	02/01/51	13:46:39.5	36.8000	-115.9500	-0.33		1		NACU	Easy	G+P	5	0
1951033	02/02/51	13:48:48.0	36.8000	-115.9500	-0.34		8		NACU	Baker-2	G+P	5	0
1951037	02/06/51	13:46:55.0	36.8000	-115.9500	-0.44		22		NACU	Fox	G+P	5	0
1951097	04/07/51	17:33:57.8	11.5558	162.3544	-0.09		81		NACU	Dog	G+P	6	0
1951110	04/20/51	17:27:00.1	11.6689	162.2403	-0.09		47		NACU	Easy	G+P	5	0
1951128	05/08/51	20:30:00.7	11.6269	162.3147	-0.06		225		NACU	George	G+P	6	0
1951144	05/24/51	17:16:59.3	11.6730	162.2486	-0.06		45.5		NACU	Item	G+P	6	0
1951295	10/22/51	14:00:00.0	37.0839	-116.0239	-0.03		.1		NACU	Able	G+P	5	0
1951301	10/28/51	15:20:08.9	37.0850	-116.0200	-0.34		3.5		NACU	Baker	G+P	5	0
1951303	10/30/51	15:00:29.8	37.0850	-116.0203	-0.35		14		NACU	Charlie	G+P	5	0
1951305	11/01/51	15:30:01.6	37.0847	-116.0197	-0.43		21		NACU	Dog	G+P	5	0
1951309	11/05/51	16:29:58.2	37.0919	-116.0244	-0.40		31		NACU	Easy	G+P	5	0
1951323	11/19/51	16:59:59.7	37.1317	-116.0386	-0.00		1.2		NACU	Sugar	G+P	5	0
1951333	11/29/51	19:59:59.7	37.1697	-116.0425	0.01		1.2		NUCU	Uncle	G+P	7	0
1952092	04/01/52	17:00:07.5	36.7983	-115.9356	-0.24		1		NACU	Able	G+P	5	0
1952106	04/15/52	17:29:57.1	37.0842	-116.0194	-0.34		1		NACU	Baker	G+P	5	0
1952113	04/22/52	17:30:10.0	37.0844	-116.0203	-1.05		31		NACU	Charlie	G+P	5	0
1952122	05/01/52	16:29:59.1	37.0842	-116.0203	-0.32		19		NACU	Dog	G+P	5	0
1952128	05/07/52	12:14:59.3	37.0531	-116.1056	-0.09		12		NACU	Easy	G+P	5	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1952146	05/25/52	11:59:59.6	37.0956	-116.1056	-0.09		11		NACU	Fox	G+P	5	0
1952153	06/01/52	11:54:59.8	37.0481	-116.0211	-0.09		15		NACU	George	G+P	5	0
1952157	06/05/52	11:55:00.3	37.1386	-116.1178	-0.09		14		NACU	How	G+P	5	0
1952305	10/31/52	19:14:59.4	11.2372	162.1964	-0.01		10400		NACU	Mike	G+P	5	0
1952320	11/15/52	23:30:00.0	11.5622	162.3525	-0.45		500		NACU	King	G+P	5	0
1953076	03/17/53	13:20:00.3	37.0478	-116.0211	-0.09		16		NACU	Annie	G+P	5	0
1953083	03/24/53	13:10:00.0	37.0956	-116.1028	-0.09		24		NACU	Nancy	G+P	5	0
1953090	03/31/53	13:00:00.0	37.0828	-116.0239	-0.09		.2		NACU	Ruth	G+P	5	0
1953096	04/06/53	15:29:38.4	37.0847	-116.0180	-1.83		11		NACU	Dixie	G+P	5	0
1953101	04/11/53	12:44:59.8	37.0989	-116.0925	-0.03		.2		NACU	Ray	G+P	5	0
1953108	04/18/53	12:35:00.0	37.1383	-116.1178	-0.09		23		NACU	Badger	G+P	5	0
1953115	04/25/53	12:29:59.8	37.0531	-116.1028	-0.09		43		NACU	Simon	G+P	5	0
1953128	05/08/53	15:29:55.4	36.5000	-115.9289	-0.74		27		NACU	Encore	G+P	5	0
1953139	05/19/53	12:04:59.5	37.0403	-116.0253	-0.09		32		NACU	Harry	G+P	5	0
1953145	05/25/53	15:30:00.3	36.7931	-115.9147	-0.16		15		NACU	Grable	G+P	5	0
1953155	06/04/53	11:14:56.7	37.0875	-116.0183	-0.41		61		NACU	Climax	G+P	5	0
1954059	02/28/54	18:45:00.0	11.6908	165.2736			15000		NACU	Bravo	G+P	5	0
1954085	03/26/54	18:30:00.4	11.6908	165.2730			11000		NACU	Romeo	G+P	5	0
1954096	04/06/54	18:20:00.4	11.4967	165.3675			110		NACU	Koon	G+P	5	0
1954115	04/25/54	18:10:00.6	11.6664	165.3872			6900		NACU	Union	G+P	5	0
1954124	05/04/54	18:10:00.1	11.6656	165.3869			13500		NACU	Yankee	G+P	5	0
1954133	05/13/54	18:20:00.1	11.6705	162.1964			1690		NACU	Nectar	G+P	5	0
1955049	02/18/55	19:59:59.2	37.0867	-116.0219	-0.23		1		NACU	Wasp	G+P	5	0
1955053	02/22/55	13:45:00.0	37.0478	-116.0211	-0.09		2		NACU	Moth	G+P	5	0
1955060	03/01/55	13:30:00.3	37.1255	-116.0475	-0.09		7		NACU	Tesla	G+P	5	0
1955066	03/07/55	13:20:00.2	37.1383	-116.1175	-0.15		43		NACU	Turk	G+P	5	0
1955071	03/12/55	13:19:59.8	37.0403	-116.0253	-0.09		4		NACU	Hornet	G+P	5	0
1955081	03/22/55	13:04:59.9	37.0947	-116.0239	-0.15		8		NACU	Bee	G+P	5	0
1955082	03/23/55	20:30:00.0	37.1683	-116.0439	0.02		1		NUCU	Ess	G+P	7	0
1955088	03/29/55	12:55:00.1	37.0956	-116.1028	-0.15		14		NACU	Apple-1	G+P	5	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1955088	03/29/55	17:59:54.8	37.0867	-116.0578	-0.23	3			NACU	Wasp Prime	G+P	5	0
1955096	04/06/55	18:00:04.1	37.0286	-116.0578	-11.16	3			NACU	HA (High Altitude)	G+P	5	0
1955099	04/09/55	12:30:00.2	37.1222	-116.0344	-0.09	2			NACU	Post	G+P	5	0
1955105	04/15/55	19:15:00.3	36.7981	-115.9289	-0.12	22			NACU	Met	G+P	5	0
1955125	05/05/55	12:10:00.0	36.0531	-116.1025	-0.15	29			NACU	Apple-2	G+P	5	0
1955134	05/14/55	20:00:00.0	28.7333	-126.2667	0.61	30			NWCU	Wigwam	G+P	7	0
1955135	05/15/55	11:59:59.9	37.0947	-116.0239	-0.15	28			NACU	Zucchini	G+P	5	0
1955305	11/01/55	00:00:00.0	37.0000	-116.0000	0.00	0	0		NACU	Project 56 No. 1	NV209	3	0
1955307	11/03/55	00:00:00.0	37.0000	-116.0000	0.00	0	0		NACU	Project 56 No. 2	NV209	3	0
1955309	11/05/55	00:00:00.0	37.0000	-116.0000	0.00	0	0		NACU	Project 56 No. 3	NV209	3	0
1956018	01/18/56	00:00:00.0	37.0000	-116.0000	0.00	0	20		NACU	Project 56 No. 4	NV209	4	0
1956125	05/04/56	18:25:29.9	11.5578	162.3550		40			NACU	Lacrosse	G+P	5	0
1956141	05/20/56	17:50:38.7	11.6683	165.3942	-1.32	3800			NACU	Cherokee	G+P	6	0
1956148	05/27/56	00:00:00.0	11.0000	162.0000	0.00	.19			NACU	Yuma	NV209	4	0
1956148	05/27/56	17:56:00.3	11.4967	165.3692		3500			NACU	Zuni	G+P	5	0
1956151	05/30/56	18:15:29.3	11.5444	162.3644	-0.09	14.9			NACU	Erie	G+P	6	0
1956158	06/06/56	00:55:30.0	11.6764	162.2222		13.7			NACU	Seminole	G+P	5	0
1956163	06/11/56	18:26:00.1	11.6000	165.4514		365			NACU	Flathead	G+P	6	0
1956163	06/11/56	18:26:00.3	11.5511	162.3586	-0.06	8			NACU	Blackfoot	G+P	6	0
1956165	06/13/56	00:00:00.0	11.0000	162.0000	0.00	1.49			NACU	Kickapoo	NV209	4	0
1956168	06/16/56	01:13:53.1	11.5467	162.3608	-0.21	1.7			NACU	Osage	G+P	6	0
1956173	06/21/56	00:00:00.0	11.0000	162.0000	0.00	15.2			NACU	Inca	NV209	4	0
1956177	06/25/56	18:06:00.2	11.6028	165.4514		1100			NACU	Dakota	G+P	6	0
1956184	07/02/56	00:00:00.0	11.0000	162.0000	0.00	360			NACU	Mohawk	NV209	4	0
1956190	07/08/56	18:06:00.2	11.6714	162.2003		1850			NACU	Apache	G+P	6	0
1956192	07/10/56	17:56:00.3	11.6633	165.3872		4500			NACU	Navajo	G+P	6	0
1956202	07/20/56	17:46:00.0	11.6739	165.3394		5000			NACU	Tewa	G+P	5	0
1956203	07/21/56	18:16:00.1	11.6719	162.3692		250			NACU	Huron	G+P	6	0
1957114	04/24/57	00:00:00.0	37.0000	-115.0000	0.00	0	0		NACU	Project 57 No. 1	NV209	3	0
1957148	05/28/57	11:55:00.2	37.0947	-116.0236	-0.15	12			NACU	Boltzmann	G+P	5	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1957153	06/02/57	11:54:59.9	37.0478	-116.0211	-0.09		.14		NACU	Franklin	G+P	5	0
1957156	06/05/57	11:45:00.3	37.1347	-116.0408	-0.15		.0005		NACU	Lassen	G+P	5	0
1957169	06/18/57	11:45:00.3	37.1347	-116.0408	-0.15		10		NACU	Wilson	G+P	5	0
1957175	06/24/57	13:30:00.1	37.7981	-115.9289	-0.21		37		NACU	Priscilla	G+P	5	0
1957182	07/01/57	00:00:00.0	37.0000	-116.0000	0.00		0	0	NACU	Coulomb-A	NV209	3	0
1957186	07/05/57	11:40:00.1	37.1347	-116.0408	-0.46		74		NACU	Hood	G+P	5	0
1957196	07/15/57	11:30:00.1	37.1503	-116.1086	-0.15		17		NACU	Diablo	G+P	5	0
1957200	07/19/57	14:00:04.6	37.1606	-116.0531	-9.14		2		NACU	John	G+P	5	0
1957205	07/24/57	11:49:59.9	37.0833	-116.1000	-0.15		10		NACU	Kepler	G+P	5	0
1957206	07/25/57	13:29:59.7	37.1347	-116.0408	-0.15		9.7		NACU	Owens	G+P	5	0
1957207	07/26/57	08:00:00.0	37.0518	-116.0334	0.15		0	20	NUCU	Pascal-A	AEC	5	0
1957219	08/07/57	12:25:00.2	37.0867	-116.0236	-0.46		19		NACU	Stokes	G+P	5	0
1957222	08/10/57	00:59:55.1	37.1939	-116.0333			0	0	NUCU	Saturn	G+P	4	0
1957230	08/18/57	12:00:00.0	37.1280	-116.1064	-0.15		17		NACU	Shasta	G+P	5	0
1957235	08/23/57	12:30:00.1	37.0867	-116.0236	-0.46		11		NACU	Doppler	G+P	5	0
1957239	08/27/57	22:35:00.0	37.0491	-116.0340	0.15		0	20	NUCU	Pascal-B	AEC	4	0
1957242	08/30/57	12:39:59.9	37.0867	-116.0236	-0.23		4.7		NACU	Franklin Prime	G+P	5	0
1957243	08/31/57	12:30:00.0	37.1872	-116.0678	-0.21		44		NACU	Smoky	G+P	4	0
1957245	09/02/57	12:40:00.0	37.0531	-116.1025	-0.15		11		NACU	Galileo	G+P	5	0
1957249	09/06/57	12:45:00.0	37.1347	-116.0408	-0.15		.197		NACU	Wheeler	G+P	5	0
1957249	09/06/57	20:05:00.6	37.0000	-116.0000			.3		NACU	Coulomb-B	G+P	5	0
1957251	09/08/57	12:59:59.8	37.0867	-116.0236	-0.23		1		NACU	Laplace	G+P	5	0
1957257	09/14/57	16:44:59.8	37.0336	-116.0314	-0.15		11		NACU	Fizeau	G+P	5	0
1957259	09/16/57	12:49:59.9	37.0867	-116.0236	-0.46		12		NACU	Newton	G+P	5	0
1957262	09/19/57	16:59:59.5	37.1958	-116.2031	0.24		1.7		NUCU	Rainier	G+P	7	0
1957266	09/23/57	12:29:59.8	37.1383	-116.1175	-0.15		19		NACU	Whitney	G+P	5	0
1957271	09/28/57	12:59:59.9	37.1347	-116.0408	-0.46		12		NACU	Charleston	G+P	5	0
1957280	10/07/57	13:00:00.1	37.1347	-116.0408	-0.15		8		NACU	Morgan	G+P	5	0
1957340	12/06/57	20:15:00.0	37.0499	-116.0309	0.08		0	20	NUCU	Pascal-C	AEC	5	0
1957343	12/09/57	00:00:00.0	37.0000	-116.0000	0.00		.5		NACU	Coulomb-C	NV209	4	0

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1958053	02/22/58	00:00:00.0	37.0000	-116.0000	0.00			.001	NUCU	Venus	NV209	3	0
1958073	03/14/58	00:00:00.0	37.0000	-116.0000	0.00			.001	NUCU	Uranus	NV209	3	0
1958118	04/28/58	02:40:00.3	12.6167	168.0250	-26.21		1.7		NACU	Yucca	G+P	6	0
1958125	05/05/58	18:15:00.1	11.5564	162.3542			18		NACU	Cactus	G+P	5	0
1958131	05/11/58	17:50:00.1	11.6908	165.2736			1360		NACU	Fir	G+P	6	0
1958131	05/11/58	18:15:00.1	11.5411	162.3506			81		NACU	Butternut	G+P	6	0
1958132	05/12/58	18:30:00.1	11.6750	162.2056			1370		NACU	Koa	G+P	5	0
1958136	05/16/58	01:30:00.5	11.3447	162.1789	0.15		9		NWCU	Wahoo	G+P	8	0
1958140	05/20/58	18:30:00.1	11.5439	162.3561			5.9		NACU	Holly	G+P	6	0
1958141	05/21/58	21:20:00.2	11.4961	165.3708			25.1		NACU	Nutmeg	G+P	6	0
1958146	05/26/58	02:00:00.1	11.6603	162.2253			330		NACU	Yellowwood	G+P	6	0
1958146	05/26/58	18:00:00.1	11.5428	162.3539			57		NACU	Magnolia	G+P	6	0
1958150	05/30/58	02:15:00.2	11.6633	162.2300			11.6		NACU	Tobacco	G+P	6	0
1958151	05/31/58	03:00:00.1	11.6908	165.2736			92		NACU	Sycamore	G+P	6	0
1958153	06/02/58	18:45:00.1	11.5411	162.3517			15		NACU	Rose	G+P	6	0
1958159	06/08/58	18:15:00.2	11.3808	162.2192	0.05		8		NWCU	Umbrella	G+P	8	0
1958161	06/10/58	17:30:00.1	11.6872	165.4150			213		NACU	Maple	G+P	6	0
1958165	06/14/58	17:30:00.1	11.6908	165.2733			319		NACU	Aspen	G+P	6	0
1958165	06/14/58	18:30:00.1	11.6603	162.2253			1450		NACU	Walnut	G+P	6	0
1958169	06/18/58	03:00:00.1	11.5442	162.3564			11		NACU	Linden	G+P	6	0
1958178	06/27/58	17:30:00.1	11.6872	165.4150			412		NACU	Redwood	G+P	6	0
1958178	06/27/58	18:30:00.1	11.6633	162.2300			880		NACU	Elder	G+P	6	0
1958179	06/28/58	19:30:00.1	11.6078	162.1078			8900		NACU	Oak	G+P	5	0
1958180	06/29/58	00:00:00.1	11.4961	162.3708			14		NACU	Hickory	G+P	6	0
1958182	07/01/58	18:30:00.1	11.5442	162.3564			5.2		NACU	Sequoia	G+P	6	0
1958183	07/02/58	17:30:00.1	11.6908	165.2736			220		NACU	Cedar	G+P	6	0
1958186	07/05/58	18:30:00.2	11.6633	162.2300			397		NACU	Dogwood	G+P	6	0
1958193	07/12/58	03:30:00.1	11.6881	165.2644			9300		NACU	Poplar	G+P	6	0
1958195	07/14/58	00:00:00.0	11.0000	162.0000	0.00		0	0	NACU	Scaevola	NV209	4	0
1958198	07/17/58	00:00:00.0	11.0000	162.0000	0.00		255		NACU	Pisonia	NV209	4	0

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1958203	07/22/58	04:20:00.1	11.4961	165.3708			65		NACU	Juniper	G+P	6	0
1958203	07/22/58	20:30:00.2	11.6633	162.2300			202		NACU	Olive	G+P	6	0
1958207	07/26/58	20:30:00.2	11.6561	162.2197			2000		NACU	Pine	G+P	6	0
1958213	08/01/58	10:50:05.6	16.7439	-169.5333	-76.81		3800		NACU	Teak	G+P	6	0
1958218	08/06/58	00:00:00.0	11.0000	162.0000	0.00		0	0	NACU	Quince	NV209	4	0
1958224	08/12/58	10:30:08.6	16.3583	-169.5356	-42.98		3800		NACU	Orange	G+P	6	0
1958230	08/18/58	00:00:00.0	11.0000	162.0000	0.00		.02		NACU	Fig	NV209	4	0
1958239	08/27/58	00:00:00.0	-38.5000	-11.5000	0.00		1	2	NACU	Argus I	NV209	4	0
1958242	08/30/58	00:00:00.0	-49.5000	-8.2000	0.00		1	2	NACU	Argus II	NV209	4	0
1958249	09/06/58	00:00:00.0	-48.5000	-9.7000	0.00		1	2	NACU	Argus III	NV209	4	0
1958255	09/12/58	20:00:00.2	37.0500	-116.0319	0.15		.038		NUCU	Otero	G+P	6	0
1958260	09/17/58	19:30:00.2	37.0494	-116.0330	0.15		.015		NUCU	Bernalillo	G+P	6	0
1958262	09/19/58	14:00:00.2	37.0867	-116.0236	-0.15		.083		NACU	Eddy	G+P	5	0
1958264	09/21/58	19:00:00.2	37.0492	-116.0336	0.15		.0015		NUCU	Luna	G+P	6	0
1958266	09/23/58	00:00:00.0	37.0000	-116.0000	0.00		0	20	NUCU	Mercury	NV209	3	0
1958269	09/26/58	20:00:00.2	37.0497	-116.0297	0.15		.002		NUCU	Valencia	G+P	6	0
1958271	09/28/58	00:00:00.2	37.1931	-116.2006			.013		NUCU	Mars	G+P	6	0
1958272	09/29/58	14:05:00.1	37.0867	-116.0236	-0.46		2		NACU	Mora	G+P	5	0
1958278	10/05/58	14:10:00.1	37.0867	-116.0236	-0.11		.077		NACU	Hidalgo	G+P	5	0
1958278	10/05/58	16:15:00.2	37.0489	-116.0342	0.15		.0055		NUCU	Colfax	G+P	6	0
1958281	10/08/58	22:00:00.1	37.1953	-116.2003	0.10		.072		NUCU	Tamalpais	G+P	7	0
1958283	10/10/58	14:30:00.1	37.0947	-116.0236	-0.03		.079		NACU	Quay	G+P	5	0
1958286	10/13/58	13:20:00.1	37.0867	-116.0236	-0.46		1.4		NACU	Lea	G+P	5	0
1958287	10/14/58	18:00:00.2	37.1939	-116.1997	0.03		.115		NUCU	Neptune	G+P	6	0
1958288	10/15/58	16:00:00.2	36.8022	-115.9322	-0.02		.0012		NACU	Hamilton	G+P	5	0
1958289	10/16/58	06:00:00.1	37.1842	-116.2011	0.25		5		NUCU	Logan	G+P	7	0
1958289	10/16/58	14:20:00.1	37.0867	-116.0236	-0.15		.037		NACU	Dona Ana	G+P	5	0
1958290	10/17/58	23:00:00.2	37.1225	-116.0347			.024		NACU	Vesta	G+P	5	0
1958291	10/18/58	14:25:00.1	37.0411	-116.0258	-0.02		.09		NACU	Rio Arriba	G+P	5	0
1958293	10/20/58	14:30:00.2	37.0447	-116.0297	-0.02		0	0	NUCU	San Juan	G+P	5	0

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1958295	10/22/58	00:00:00.0	37.0000	-116.0000	0.00		0	0	NACU	Oberon	NV209	3	0
1958295	10/22/58	13:30:00.2	37.0867	-116.0236	-0.46		6		NACU	Socorro	G+P	5	0
1958295	10/22/58	16:50:00.1	36.7981	-115.9289	-0.46		.115		NACU	Wrangell	G+P	5	0
1958295	10/22/58	23:40:00.1	37.1347	-116.0408	-0.15		.188		NACU	Rushmore	G+P	5	0
1958297	10/24/58	15:00:00.2	37.0431	-116.0269	-0.02		.021		NACU	Catron	G+P	5	0
1958297	10/24/58	16:01:00.2	37.1233	-116.0378			.0017		NACU	Juno	G+P	5	0
1958299	10/26/58	04:00:00.2	37.1814	-116.0686	-0.01		.0007		NACU	Ceres	G+P	5	0
1958299	10/26/58	10:20:00.1	36.7981	-115.9289	-0.46		4.9		NACU	Sanford	G+P	5	0
1958299	10/26/58	16:00:00.1	37.0867	-116.0236	-0.46		2.2		NACU	De Baca	G+P	5	0
1958300	10/27/58	00:00:00.0	37.0000	-116.0000	0.00		.0006		NACU	Chavez	NV209	4	0
1958302	10/29/58	00:00:00.0	37.0000	-116.0000	0.00		0	0	NACU	Mazama	NV209	3	0
1958302	10/29/58	00:00:00.2	37.1947	-116.2047	0.26		.055		NUCU	Evans	G+P	7	0
1958302	10/29/58	14:45:00.1	37.0478	-116.0247	-0.01		.0078		NACU	Humboldt	G+P	5	0
1958303	10/30/58	00:00:00.0	37.0000	-116.0000	0.00		0	0	NACU	Ganymede	NV209	3	0
1958303	10/30/58	03:00:00.1	37.0867	-116.0236	-0.46		1.3		NACU	Santa Fe	G+P	5	0
1958303	10/30/58	15:00:00.2	37.1858	-116.2019	0.25		22		NUCU	Blanca	G+P	7	0
1958303	10/30/58	20:34:00.2	37.1772	-116.0692	-0.01		.0002		NACU	Titania	G+P	5	0
1961258	09/15/61	17:00:00.1	37.1879	-116.2078	0.40	4.70	2.6		NUCU	Antler	SPRINGER	6	0
1961259	09/16/61	19:45:00.1	37.0484	-116.0328	0.10			20	NUCU	Shrew	SPRINGER	5	0
1961274	10/01/61	22:30:00.1	37.0483	-116.0345	0.10			20	NUCU	Boomer	AEC	5	0
1961283	10/10/61	18:00:00.1	37.1943	-116.2070	0.26			20	NUCU	Chena	SPRINGER	6	0
1961302	10/29/61	18:30:00.1	37.0486	-116.0311	0.19			20	NUCU	Mink	SPRINGER	5	0
1961337	12/03/61	23:04:59.6	37.0459	-116.0277	0.36		13.4		NUCU	Fisher	SPRINGER	6	0
1961344	12/10/61	19:00:00.0	32.2636	-103.8658	0.36		3		NUCU	Gnome	SPRINGER	6	261
1961347	12/13/61	18:00:00.2	37.1266	-116.0488	0.18	3.40	.5		NUCU	Mad	SPRINGER	6	0
1961351	12/17/61	16:35:00.1	37.0432	-116.0253	0.36			20	NUCU	Ringtail	SPRINGER	6	0
1961356	12/22/61	16:30:00.1	37.1949	-116.2083	0.25		.15		NUCU	Feather	SPRINGER	6	0
1962009	01/09/62	16:30:00.1	37.0446	-116.0351	0.30	4.20	5.1		NUCU	Stoat	SPRINGER	5	0
1962018	01/18/62	18:00:00.1	37.0473	-116.0344	0.26	4.50	6.4		NUCU	Agouti	SPRINGER	5	0
1962030	01/30/62	18:00:00.1	37.0468	-116.0395	0.36			20	NUCU	Dormouse	SPRINGER	5	0

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1962039	02/08/62	18:00:00.2	37.1273	-116.0527	0.18		3.07		NUCU	Stillwater	SPRINGER	5	0
1962040	02/09/62	16:30:00.1	37.0436	-116.0389	0.24		7.1		NUCU	Armadillo	SPRINGER	5	0
1962046	02/15/62	18:00:00.1	37.2263	-116.0593	0.29		5.7		NUCU	Hard Hat	SPRINGER	5	72
1962050	02/19/62	16:30:00.1	37.0491	-116.0295	0.15	4.20	1.9		NUCU	Chinchilla	SPRINGER	5	0
1962050	02/19/62	17:50:00.2	37.1274	-116.0371	0.21			20	NUCU	Codsaw	SPRINGER	5	0
1962054	02/23/62	18:00:00.2	37.1289	-116.0483	0.30		11.9		NUCU	Cimarron	SPRINGER	4	0
1962055	02/24/62	16:30:00.1	37.0483	-116.0319	0.06			20	NUCU	Platypus	SPRINGER	5	0
1962060	03/01/62	19:10:00.1	37.0413	-116.0287	0.36		9.5		NUCUG	Pampas	SPRINGER	6	0
1962064	03/05/62	18:15:00.1	37.1111	-116.3649	0.03	3.60	.43		NUCU	Danny Boy	SPRINGER	6	70
1962065	03/06/62	16:30:00.1	37.0484	-116.0337	0.07			20	NUCU	Ermine	SPRINGER	5	0
1962067	03/08/62	18:00:00.2	37.1222	-116.0489	0.26		8.4		NUCU	Brazos	SPRINGER	4	0
1962074	03/15/62	16:30:00.1	37.0440	-116.0310	0.24			20	NUCU	Hognose	SPRINGER	4	0
1962087	03/28/62	18:00:00.2	37.1243	-116.0339	0.19		3.4		NUCU	Hoosic	SPRINGER	4	0
1962090	03/31/62	18:00:00.1	37.0469	-116.0369	0.14			20	NUCU	Chinchilla II	SPRINGER	5	0
1962095	04/05/62	18:00:00.1	37.0445	-116.0235	0.26	4.30	10.6		NUCU	Dormouse Prime	SPRINGER	5	0
1962096	04/06/62	18:00:00.2	37.1177	-116.0440	0.23			20	NUCU	Passaic	SPRINGER	4	0
1962102	04/12/62	18:00:00.2	37.1272	-116.0449	0.15			20	NUCU	Hudson	SPRINGER	4	0
1962104	04/14/62	18:00:00.1	37.2220	-116.1574	0.19		1.85		NUCU	Platte	SPRINGER	5	0
1962111	04/21/62	18:40:00.2	37.1190	-116.0315	0.19			20	NUCU	Dead	SPRINGER	4	0
1962115	04/25/62	00:00:00.0	2.0000	-157.0000	0.00		190		NACU	Adobe	NV209	3	0
1962117	04/27/62	00:00:00.0	2.0000	-157.0000	0.00		410		NACU	Aztec	NV209	3	0
1962117	04/27/62	18:00:00.2	37.1184	-116.0378	0.22			20	NUCU	Black	SPRINGER	4	0
1962122	05/02/62	00:00:00.0	2.0000	-157.0000	0.00		1090		NACU	Arkansas	NV209	3	0
1962124	05/04/62	00:00:00.0	2.0000	-157.0000	0.00		670		NACU	Questa	NV209	3	0
1962126	05/06/62	00:00:00.0	4.8333	-149.4167	0.00				NACU	Frigate Bird	NV209	4	0
1962127	05/07/62	19:33:00.1	37.0466	-116.0250	0.26			20	NUCU	Paca	SPRINGER	5	0
1962128	05/08/62	00:00:00.0	2.0000	-157.0000	0.00		100		NACU	Yukon	NV209	3	0
1962129	05/09/62	00:00:00.0	2.0000	-157.0000	0.00		100		NACU	Mesilla	NV209	3	0
1962130	05/10/62	15:00:00.2	37.1276	-116.0483	0.17			20	NUCU	Arikaree	AEC	4	0
1962131	05/11/62	00:00:00.0	2.0000	-157.0000	0.00		50		NACU	Muskegon	NV209	3	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1962131	05/11/62	20:02:05.9	31.2450	-124.2117	0.20			20	NWCU	Swordfish	JOHNSON	5	0
1962132	05/12/62	00:00:00.0	2.0000	-157.0000	0.00		500		NACU	Encino	NV209	3	0
1962132	05/12/62	19:00:00.1	37.0652	-116.0304	0.43	4.60	40		NUCU	Aardvark	SPRINGER	5	0
1962134	05/14/62	00:00:00.0	2.0000	-157.0000	0.00		97		NACU	Swanee	NV209	3	0
1962139	05/19/62	00:00:00.0	2.0000	-157.0000	0.00		73		NACU	Chetco	NV209	3	0
1962139	05/19/62	15:00:00.2	37.1226	-116.0472	0.22		4.5		NUCU	Eel	SPRINGER	4	0
1962145	05/25/62	00:00:00.0	2.0000	-157.0000	0.00		2.6		NACU	Tanana	NV209	3	0
1962145	05/25/62	15:00:00.2	37.1248	-116.0520	0.19			20	NUCU	White	SPRINGER	4	0
1962147	05/27/62	00:00:00.0	2.0000	-157.0000	0.00		43		NACU	Nambe	NV209	3	0
1962152	06/01/62	17:00:00.1	37.0456	-116.0345	0.16			20	NUCU	Raccoon	SPRINGER	4	0
1962157	06/06/62	17:00:00.1	37.0457	-116.0393	0.26			20	NUCU	Packrat	SPRINGER	5	0
1962159	06/08/62	00:00:00.0	2.0000	-157.0000	0.00		782		NACU	Alma	NV209	3	0
1962160	06/09/62	00:00:00.0	2.0000	-157.0000	0.00		210		NACU	Truckee	NV209	3	0
1962161	06/10/62	00:00:00.0	2.0000	-157.0000	0.00		3000		NACU	Yeso	NV209	3	0
1962163	06/12/62	00:00:00.0	2.0000	-157.0000	0.00		1200		NACU	Harlem	NV209	3	0
1962164	06/13/62	21:00:00.1	37.2222	-116.1621	0.20		2.9		NUCU	Des Moines	SPRINGER	5	0
1962166	06/15/62	00:00:00.0	2.0000	-157.0000	0.00		800		NACU	Rinconada	NV209	3	0
1962168	06/17/62	00:00:00.0	2.0000	-157.0000	0.00		52		NACU	Dulce	NV209	3	0
1962170	06/19/62	00:00:00.0	2.0000	-157.0000	0.00		2.2		NACU	Petit	NV209	3	0
1962172	06/21/62	17:00:00.1	37.0431	-116.0303	0.26			20	NUCU	Daman I	SPRINGER	4	0
1962173	06/22/62	00:00:00.0	2.0000	-157.0000	0.00		81.5		NACU	Otowi	NV209	3	0
1962178	06/27/62	00:00:00.0	2.0000	-157.0000	0.00		7650		NACU	Bighorn	NV209	3	0
1962178	06/27/62	18:00:00.1	37.0416	-116.0353	0.41	4.90	67		NUCU	Haymaker	SPRINGER	5	0
1962179	06/28/62	17:00:00.1	37.0091	-116.2011	0.31			20	NUCU	Marshmallow	SPRINGER	5	0
1962181	06/30/62	00:00:00.0	2.0000	-157.0000	0.00		1270		NACU	Bluestone	NV209	3	0
1962181	06/30/62	21:30:00.2	37.1174	-116.0474	0.15			20	NUCU	Sacramento	SPRINGER	4	0
1962187	07/06/62	17:00:00.1	37.1770	-116.0454	0.19	4.40	104		NUCU	Sedan	SPRINGER	6	0
1962188	07/07/62	00:00:00.0	37.0000	-116.0000	0.00			20	NACU	Little Feller II	NV209	4	0
1962190	07/09/62	00:00:00.0	17.0000	-169.0000	0.00		1400		NACU	Starfish Prime	NV209	3	0
1962191	07/10/62	00:00:00.0	2.0000	-157.0000	0.00		1000		NACU	Sunset	NV209	3	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1962192	07/11/62	00:00:00.0	2.0000	-157.0000	0.00		3880		NACU	Pamlico	NV209	3	0
1962192	07/11/62	16:45:00.1	37.1224	-116.3330	0.00		.5		NUCU	Johnnie Boy	SPRINGER	5	0
1962194	07/13/62	16:00:00.2	37.0551	-116.0334	0.41	4.40	20	200	NUCU	Merrimac	SPRINGER	5	0
1962195	07/14/62	00:00:00.0	37.0000	-116.0000	0.00	3.70		20	NACU	Small Boy	NV209	5	0
1962198	07/17/62	00:00:00.0	37.0000	-116.0000	0.00			20	NACU	Little Feller I	NV209	4	0
1962208	07/27/62	21:00:00.2	37.1297	-116.0565	0.15	4.30		20	NUCU	Wichita	SPRINGER	5	0
1962236	08/24/62	15:00:00.2	37.1186	-116.0395	0.23	4.40		20	NUCU	York	SPRINGER	5	0
1962236	08/24/62	17:00:00.1	37.0461	-116.0238	0.21	4.20		20	NUCU	Bobac	SPRINGER	6	0
1962249	09/06/62	17:00:00.2	37.1303	-116.0447	0.16			20	NUCU	Raritan	AEC	4	0
1962257	09/14/62	17:10:00.1	37.0439	-116.0211	0.22	4.40		20	NUCU	Hyrax	SPRINGER	5	0
1962263	09/20/62	17:10:00.1	37.0551	-116.0293	0.24			20	NUCU	Peba	SPRINGER	5	0
1962272	09/29/62	17:00:00.2	37.1167	-116.0328	0.21			20	NUCU	Allegheny	SPRINGER	5	0
1962275	10/02/62	00:00:00.0	17.0000	-169.0000	0.00		75		NACU	Androscoggin	NV209	3	0
1962278	10/05/62	17:00:00.2	37.1394	-116.0503	0.49	5.06	115		NUCU	Mississippi	SPRINGER	5	0
1962279	10/06/62	00:00:00.0	17.0000	-169.0000	0.00		11.3		NACU	Bumping	NV209	3	0
1962285	10/12/62	15:00:00.2	37.1228	-116.0508	0.18			20	NUCU	Roanoke	SPRINGER	5	0
1962285	10/12/62	17:00:00.1	37.0488	-116.0326	0.07			20	NUCU	Wolverine	AEC	4	0
1962291	10/18/62	00:00:00.0	17.0000	-169.0000	0.00		1590		NACU	Chama	NV209	3	0
1962291	10/18/62	15:00:00.1	37.1285	-116.0402	0.06			20	NUCU	Tioga	AEC	4	0
1962292	10/19/62	18:00:00.1	37.0395	-116.0211	0.24		12.5		NUCU	Bandicoot	SPRINGER	5	0
1962293	10/20/62	00:00:00.0	17.0000	-169.0000	0.00			20	NACU	Checkmate	NV209	3	0
1962299	10/26/62	00:00:00.0	17.0000	-169.0000	0.00		200	1000	NACU	Bluegill 3 Prime	NV209	3	0
1962300	10/27/62	00:00:00.0	17.0000	-169.0000	0.00		800		NACU	Calamity	NV209	3	0
1962300	10/27/62	15:00:00.1	37.1493	-116.0535	0.32			20	NUCU	Santee	SPRINGER	4	0
1962303	10/30/62	00:00:00.0	17.0000	-169.0000	0.00		8300		NACU	Housatonic	NV209	3	0
1962305	11/01/62	00:00:00.0	17.0000	-169.0000	0.00		200	1000	NACU	Kingfish	NV209	3	0
1962308	11/04/62	00:00:00.0	17.0000	-169.0000	0.00			20	NACU	Tightrope	NV209	3	0
1962313	11/09/62	18:00:00.2	37.1638	-116.0733	0.17			20	NUCU	St. Lawrence	AEC	4	0
1962319	11/15/62	16:30:00.1	37.0418	-116.0239	0.24			20	NUCU	Gundi	AEC	4	0
1962331	11/27/62	18:00:00.1	37.1228	-116.0290	0.23			20	NUCU	Anacostia	SPRINGER	6	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1962338	12/04/62	16:00:00.1	37.1281	-116.0500	0.23			20	NUCU	Taunton	AEC	4	0
1962341	12/07/62	19:00:00.1	37.0518	-116.0293	0.30			20	NUCUG	Tendrac	SPRINGER	6	0
1962346	12/12/62	17:25:00.1	37.1687	-116.2061	0.40			20	NUCU	Madison	SPRINGER	5	0
1962346	12/12/62	18:45:00.1	37.0461	-116.0156	0.23			20	NUCU	Numbat	SPRINGER	5	0
1962348	12/14/62	18:00:00.2	37.1242	-116.0400	0.06			20	NUCU	Manatee	AEC	4	0
1963039	02/08/63	16:00:00.2	37.1489	-116.0519	0.30			20	NUCU	Casselman	SPRINGER	5	0
1963039	02/08/63	16:00:01.2	37.1260	-116.0387	0.06			20	NUCU	Hatchie	AEC	3	0
1963039	02/08/63	18:30:00.1	37.0461	-116.0211	0.26			20	NUCU	Acushi	SPRINGER	5	0
1963039	02/08/63	18:30:00.1	37.0583	-116.0293	0.33			20	NUCU	Ferret	AEC	4	0
1963046	02/15/63	17:00:00.1	37.0490	-116.0318	0.06			20	NUCU	Chipmunk	AEC	4	0
1963052	02/21/63	19:47:00.1	37.1203	-116.0457	0.23			20	NUCU	Kaweah	SPRINGER	6	0
1963052	02/21/63	19:47:08.6	37.1548	-116.0799	0.16			20	NUCU	Carmel	SPRINGER	4	0
1963060	03/01/63	19:00:00.1	37.0445	-116.0265	0.30			20	NUCU	Jerboa	AEC	4	0
1963074	03/15/63	16:22:53.1	37.1258	-116.0448	0.13			20	NUCU	Toyah	AEC	4	0
1963088	03/29/63	15:49:00.1	37.0417	-116.0184	0.28			20	NUCU	Gerbil	SPRINGER	4	0
1963095	04/05/63	17:52:00.1	37.0373	-116.0239	0.24			20	NUCU	Ferret Prime	SPRINGER	4	0
1963100	04/10/63	16:01:30.1	37.0488	-116.0303	0.07			20	NUCU	Coypu	AEC	4	0
1963101	04/11/63	16:03:00.2	37.1567	-116.0710	0.23			20	NUCU	Cumberland	AEC	4	0
1963114	04/24/63	16:09:30.1	37.1206	-116.0363	0.18			20	NUCU	Kootanai	AEC	4	0
1963114	04/24/63	16:09:30.1	37.1205	-116.0362	0.06			20	NUCU	Paisano	AEC	4	0
1963129	05/09/63	18:19:30.1	37.0494	-116.0156	0.27			20	NUCU	Gundi Prime	AEC	4	0
1963135	05/15/63	00:00:00.0	37.0000	-115.0000	0.00	0	0	0	NACU	Double Tracks	NV209	3	0
1963137	05/17/63	14:55:00.1	37.0439	-116.0156	0.24			20	NUCU	Harkee	AEC	4	0
1963137	05/17/63	14:55:00.1	37.0483	-116.0324	0.07			20	NUCU	Tejon	AEC	4	0
1963142	05/22/63	15:40:00.1	37.1111	-116.0391	0.39	4.84	20	200	NUCU	Stones	SPRINGER	5	0
1963145	05/25/63	00:00:00.0	37.0000	-115.0000	0.00	0	0	0	NACU	Clean Slate I	NV209	3	0
1963149	05/29/63	15:03:30.2	37.1281	-116.0425	0.21			20	NUCU	Pleasant	AEC	4	0
1963151	05/31/63	00:00:00.0	37.0000	-115.0000	0.00	0	0	0	NACU	Clean Slate II	NV209	3	0
1963156	06/05/63	17:00:00.1	37.1966	-116.2092	0.24	4.36	3.1		NUCU	Yuba	SPRINGER	5	0
1963157	06/06/63	14:00:00.1	37.0450	-116.0364	0.13			20	NUCU	Hutia	SPRINGER	4	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1963157	06/06/63	16:58:00.2	37.1247	-116.0400	0.09			20	NUCU	Apshapa	AEC	4	0
1963160	06/09/63	00:00:00.0	37.0000	-115.0000	0.00		0	0	NACU	Clean Slate III	NV209	3	0
1963165	06/14/63	14:10:00.1	37.0461	-116.0184	0.20			20	NUCU	Mataco	SPRINGER	4	0
1963176	06/25/63	23:00:00.2	37.1314	-116.0681	0.23			20	NUCU	Kennebec	SPRINGER	4	0
1963224	08/12/63	23:45:00.1	37.0417	-116.0156	0.30			20	NUCU	Pekan	SPRINGER	5	0
1963227	08/15/63	13:00:00.2	37.1541	-116.0766	0.23			20	NUCU	Satsop	SPRINGER	5	0
1963235	08/23/63	13:20:00.1	37.1250	-116.0354	0.25			20	NUCU_SALVO	Kohocton	SPRINGER	6	0
1963256	09/13/63	13:53:00.2	37.1634	-116.0806	0.23			20	NUCU	Ahtanum	SPRINGER	5	0
1963256	09/13/63	17:00:00.1	37.0604	-116.0217	0.71	5.80	249		NUCU	Bilby	SPRINGER	6	332
1963270	09/27/63	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Narraguagus	NV209	2	0
1963270	09/27/63	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Carp	NV209	3	0
1963284	10/11/63	14:00:00.1	37.0373	-116.0212	0.26			20	NUCU	Grunion	SPRINGER	5	0
1963284	10/11/63	14:00:00.2	37.1187	-116.0339	0.15			20	NUCU	Tornillo	SPRINGER	6	0
1963289	10/16/63	17:00:00.1	37.1982	-116.2295	0.55	5.30	20	200	NUCU	Clearwater	SPRINGER	6	0
1963290	10/17/63	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mullet	NV209	2	0
1963299	10/26/63	17:00:00.1	39.2002	-118.3803	0.37	4.90	12		NUCU	Shoal	SPRINGER	6	244
1963318	11/14/63	16:00:00.1	37.0395	-116.0184	0.26			20	NUCU	Anchovy	SPRINGER	5	0
1963319	11/15/63	15:00:00.2	37.1323	-116.0469	0.17			20	NUCU	Mustang	SPRINGER	5	0
1963326	11/22/63	17:30:00.1	37.1193	-116.0452	0.30		20	200	NUCU	Greys	SPRINGER	5	0
1963338	12/04/63	16:38:30.1	37.0396	-116.0294	0.26			20	NUCU_SALVO	Barracuda	SPRINGER	6	0
1963346	12/12/63	16:02:00.2	37.1310	-116.0439	0.16		5.3		NUCU	Eagle	SPRINGER	5	0
1963354	12/20/63	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Tuna	NV209	2	0
1964016	01/16/64	16:00:00.2	37.1423	-116.0491	0.49	5.20	20	200	NUCU	Fore	SPRINGER	8	0
1964023	01/23/64	16:00:00.2	37.1264	-116.0363	0.26	4.20	10.5		NUCU	Oconto	SPRINGER	8	0
1964030	01/30/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Club	NV209	3	0
1964043	02/12/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Solendon	NV209	2	0
1964044	02/13/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bunker	NV209	3	0
1964049	02/18/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mackerel	NV209	2	0
1964049	02/18/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bonefish	NV209	3	0
1964051	02/20/64	15:30:00.1	37.1509	-116.0401	0.49	5.10	20	200	NUCU	Klickitat	SPRINGER	9	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1964072	03/12/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Handicap	NV209	3	0
1964073	03/13/64	16:02:00.1	37.0505	-116.0115	0.11			20	NUCU	Pike	SPRINGER	8	0
1964105	04/14/64	14:40:00.1	37.1289	-116.0298	0.20			20	NUCU	Hook	SPRINGER	8	0
1964106	04/15/64	14:30:00.1	37.0439	-116.0184	0.15			20	NUCU	Sturgeon	SPRINGER	8	0
1964108	04/17/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bogey	NV209	2	0
1964115	04/24/64	20:10:00.2	37.1496	-116.0554	0.51	5.20	20	200	NUCU	Turf	SPRINGER	10	0
1964120	04/29/64	20:47:00.1	37.0396	-116.0266	0.26	4.10		20	NUCU	Pipefish	SPRINGER	9	0
1964128	05/07/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Driver	NV209	2	0
1964135	05/14/64	14:40:00.2	37.1173	-116.0389	0.16			20	NUCU	Backswing	SPRINGER	8	0
1964136	05/15/64	16:15:00.1	37.0417	-116.0122	0.24			20	NUCU	Minnow	SPRINGER	8	0
1964163	06/11/64	16:45:00.2	37.1486	-116.0760	0.26			20	NUCU	Ace	SPRINGER	8	0
1964164	06/12/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bitterling	NV209	3	0
1964170	06/18/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Duffer	NV209	3	0
1964177	06/25/64	13:30:00.1	37.1111	-116.0288	0.21			20	NUCU	Fade	SPRINGER	8	0
1964182	06/30/64	13:33:00.1	37.1744	-116.0564	0.26			20	NUCU	Dub	SPRINGER	8	0
1964198	07/16/64	13:15:00.2	37.1822	-116.0454	0.39		20	200	NUCU	Bye	SPRINGER	8	0
1964199	07/17/64	17:18:30.0	37.0176	-116.0296	0.27			20	NUCUG	Cormorant	SPRINGER	5	0
1964205	07/23/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Links	NV209	3	0
1964206	07/24/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Trogon	NV209	3	0
1964232	08/19/64	16:00:00.1	37.1590	-116.0831	0.17		4.4		NUCU	Alva	SPRINGER	8	0
1964235	08/22/64	22:17:00.1	37.0653	-116.0154	0.45			20	NUCU	Canvasback	SPRINGER	8	0
1964240	08/27/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Player	NV209	2	0
1964241	08/28/64	17:06:00.0	37.0670	-116.0223	0.36			20	NUCU	Haddock	SPRINGER	8	0
1964248	09/04/64	18:15:00.1	37.0176	-116.0227	0.26			20	NUCU	Guanay	SPRINGER	8	0
1964255	09/11/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Spoon	NV209	3	0
1964269	09/25/64	00:00:00.0	37.0000	-116.0000	0.00		0	0	NUCUG	Courser	NV209	2	0
1964276	10/02/64	20:03:00.0	37.0779	-116.0085	0.45	4.89		20	NUCU	Auk	SPRINGER	9	0
1964283	10/09/64	14:00:00.1	37.1513	-116.0770	0.41	4.80	38		NUCU	Par	SPRINGER	8	210
1964290	10/16/64	15:59:30.0	37.0395	-116.0157	0.26			20	NUCU_SALVO	Barbel	SPRINGER	9	0
1964296	10/22/64	16:00:00.0	31.1421	-89.5699	0.83	4.60	5.3		NUCU	Salmon	SPRINGER	8	11

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1964297	10/23/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Garden	NV209	2	0
1964305	10/31/64	17:04:58.6	37.1072	-116.0323	0.39			20	NUCU	Forest	SPRINGER	8	0
1964310	11/05/64	15:00:00.1	37.1744	-116.0670	0.40	4.80	12		NUCU	Handcar	SPRINGER	7	0
1964340	12/05/64	21:15:00.0	37.1343	-116.0697	0.22		3.4	20	NUCU_SALVO	Drill (Target-Upper)	AEC	6	0
1964340	12/05/64	21:15:00.1	37.1144	-116.0534	0.40	4.80	20	200	NUCU	Crepe	SPRINGER	7	0
1964351	12/16/64	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Cassowary	NV209	3	0
1964351	12/16/64	20:00:00.0	37.0348	-116.0123	0.18		1.3		NUCU	Parrot	SPRINGER	5	92
1964351	12/16/64	20:10:00.1	37.1778	-116.0670	0.15		2.7		NUCU	Mudpack	SPRINGER	7	204
1964353	12/18/64	19:35:00.1	37.0825	-116.3425	0.03		.092		NUCU	Sulky	SPRINGER	6	0
1965014	01/14/65	16:00:00.1	37.1190	-116.0248	0.22			20	NUCU	Wool	SPRINGER	8	0
1965029	01/29/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Tern	NV209	3	0
1965035	02/04/65	15:30:00.1	37.1308	-116.0616	0.23			20	NUCU	Cashmere	SPRINGER	8	0
1965043	02/12/65	15:10:29.5	37.1645	-116.0766	0.22		.33		NUCU	Alpaca	SPRINGER	5	0
1965047	02/16/65	17:30:00.0	37.0516	-116.0238	0.30		10.1		NUCU	Merlin	SPRINGER	7	0
1965049	02/18/65	16:18:47.2	36.8180	-115.9492	0.18	4.54		20	NUCU	Wishbone	SPRINGER	9	0
1965050	02/19/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Seersucker	NV209	2	0
1965062	03/03/65	19:13:00.0	37.0645	-116.0372	0.75	5.33	20	200	NUCU	Wagtail	SPRINGER	9	0
1965079	03/20/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Suede	NV209	3	0
1965085	03/26/65	15:34:08.2	37.1476	-116.0429	0.54	5.25	20	200	NUCU	Cup	SPRINGER	9	0
1965095	04/05/65	21:00:00.0	37.0258	-116.0226	0.45			20	NUCU	Kestrel	SPRINGER	8	0
1965104	04/14/65	13:14:00.1	37.2804	-116.5236	0.09	4.33	4.3		NUCU	Palanquin	SPRINGER	8	154
1965111	04/21/65	22:00:00.0	37.0072	-116.2021	0.30	5.00		20	NUCU	Gum Drop	SPRINGER	9	0
1965112	04/22/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Chenille	NV209	3	0
1965113	04/23/65	21:44:00.0	37.0174	-115.9953	0.32			20	NUCU	Muscovy	AEC	8	0
1965127	05/07/65	15:47:11.2	37.1404	-116.0666	0.18		7		NUCU	Tee	SPRINGER	7	0
1965132	05/12/65	18:15:00.1	37.2427	-116.4309	0.70			20	NUCU	Buteo	SPRINGER	8	0
1965134	05/14/65	14:57:52.2	36.8234	-115.9668	0.29		.75		NUCU	Cambric	AEC	6	0
1965134	05/14/65	17:32:36.2	37.0588	-116.0105	0.43			20	NUCU	Scaup	SPRINGER	8	0
1965141	05/21/65	13:08:52.1	37.1186	-116.0277	0.28			20	NUCU	Tweed	SPRINGER	8	0
1965162	06/11/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Organdy	NV209	3	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1965162	06/11/65	19:45:00.0	37.0428	-116.0170	0.18		1.3		NUCU	Petrel	SPRINGER	7	0
1965167	06/16/65	16:30:00.2	36.8181	-115.9561	0.19	4.48		20	NUCU	Diluted Waters	SPRINGER	9	0
1965168	06/17/65	17:00:00.1	37.2234	-116.0570	0.11			20	NUCU	Tiny Tot	SPRINGER	5	0
1965197	07/16/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Izzer	NV209	2	0
1965203	07/22/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Pongee	NV209	2	0
1965204	07/23/65	17:00:00.0	37.0978	-116.0330	0.53	5.40	20	200	NUCU	Bronze	SPRINGER	10	0
1965218	08/06/65	17:23:30.0	37.0177	-116.0398	0.32			20	NUCU	Mauve	SPRINGER	8	0
1965233	08/21/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Ticking	NV209	3	0
1965239	08/27/65	13:51:13.1	37.1373	-116.0701	0.17			20	NUCU	Centaur	SPRINGER	6	0
1965244	09/01/65	20:08:00.0	37.0230	-116.0090	0.30	4.20		20	NUCU_SALVO	Moa	SPRINGER	10	0
1965253	09/10/65	17:12:00.0	37.0780	-116.0167	0.46	5.16	20	200	NUCUG	Charcoal	SPRINGER	10	0
1965260	09/17/65	15:08:23.1	37.1110	-116.0346	0.22			20	NUCU	Elkhart	SPRINGER	6	0
1965302	10/29/65	21:00:00.1	51.4381	179.1826	0.70	6.10	80		NUCU	Long Shot	SPRINGER	10	178
1965316	11/12/65	18:00:00.1	37.0500	-116.0221	0.24			20	NUCU	Sepia	SPRINGER	6	0
1965327	11/23/65	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Kermet	NV209	3	0
1965337	12/03/65	15:13:02.1	37.1648	-116.0523	0.68	5.62	20	200	NUCU	Corduroy	SPRINGER	10	33
1965350	12/16/65	15:39:18.2	37.1408	-116.0632	0.26			20	NUCU	Emerson	SPRINGER	6	0
1965350	12/16/65	19:15:00.0	37.0726	-116.0291	0.50	5.30	20	200	NUCU	Buff	SPRINGER	8	0
1966013	01/13/66	15:37:43.1	37.1162	-116.0275	0.18			20	NUCU	Maxwell	SPRINGER	8	0
1966018	01/18/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sienna	NV209	2	0
1966018	01/18/66	18:35:00.0	37.0917	-116.0187	0.56	5.20	20	200	NUCU	Lampblack	SPRINGER	9	0
1966021	01/21/66	18:28:00.0	37.0317	-116.0158	0.33			20	NUCU	Dovekie	SPRINGER	8	0
1966022	01/22/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Reo	NV209	3	0
1966034	02/03/66	18:17:37.1	37.1263	-116.0695	0.27	4.30		20	NUCU	Plaid II	SPRINGER	9	0
1966055	02/24/66	15:55:07.0	37.2718	-116.4338	0.67	5.00	19		NUCU	Rex	SPRINGER	9	86
1966064	03/05/66	18:15:00.1	37.1745	-116.2084	0.41	4.11		20	NUCU	Red Hot	SPRINGER	9	0
1966066	03/07/66	18:41:00.1	37.0374	-116.0294	0.20			20	NUCU_SALVO	Finfoot	SPRINGER	9	0
1966071	03/12/66	18:04:13.1	37.1437	-116.0525	0.40			20	NUCU	Clymer	SPRINGER	8	0
1966077	03/18/66	19:00:00.0	37.0093	-116.0091	0.33			20	NUCU	Purple	SPRINGER	8	0
1966083	03/24/66	14:55:28.1	37.1133	-116.0314	0.15			20	NUCU	Templar	SPRINGER	8	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1966091	04/01/66	18:40:00.0	37.1027	-116.0199	0.56			20	NUCU	Lime	SPRINGER	8	0
1966096	04/06/66	13:57:17.1	37.1395	-116.1409	0.23	4.45		20	NUCU	Stutz	SPRINGER	10	0
1966097	04/07/66	22:27:30.0	37.0174	-115.9922	0.23			20	NUCU	Tomato	SPRINGER	8	0
1966104	04/14/66	14:13:43.1	37.2427	-116.4309	0.54	5.40	70		NUCU	Duryea	SPRINGER	10	88
1966113	04/23/66	00:00:00.0	37.0000	-116.0000	0.00		1.4		NUCU	Fenton	NV209	4	0
1966115	04/25/66	18:38:00.1	36.8874	-115.9407	0.30	4.51		20	NUCU	Pin Stripe	SPRINGER	10	0
1966119	04/29/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Ochre	NV209	2	0
1966124	05/04/66	13:32:17.1	37.1371	-116.1371	0.20	5.50		20	NUCU	Traveler	SPRINGER	9	0
1966125	05/05/66	14:00:00.0	37.0506	-116.0379	0.31	4.40	12		NUCU	Cyclamen	SPRINGER	9	0
1966126	05/06/66	15:00:00.1	37.3480	-116.3219	0.67	5.50	73		NUCU	Chartreuse	SPRINGER	10	0
1966132	05/12/66	19:37:26.2	37.1343	-116.0711	0.25	4.30		20	NUCU	Tapestry	SPRINGER	9	0
1966133	05/13/66	13:30:00.0	37.0869	-116.0334	0.55	5.60	20	200	NUCU	Piranha	SPRINGER	9	0
1966139	05/19/66	13:56:28.1	37.1111	-116.0579	0.67	5.90	20	200	NUCU	Dumont	SPRINGER	10	44
1966147	05/27/66	20:00:00.0	37.1784	-116.0978	0.34	5.10	22		NUCU	Discus Thrower	SPRINGER	9	0
1966153	06/02/66	15:30:00.1	37.2271	-116.0555	0.46	5.60	62		NUCU	Pile Driver	SPRINGER	10	251
1966154	06/03/66	14:00:00.0	37.0684	-116.0353	0.56	5.70	20	200	NUCU	Tan	SPRINGER	10	0
1966161	06/10/66	14:30:00.0	37.0594	-116.0388	0.49			20	NUCU	Puce	SPRINGER	8	0
1966166	06/15/66	17:00:00.0	37.0097	-116.2024	0.33			20	NUCU	Double Play	SPRINGER	5	0
1966166	06/15/66	18:02:47.1	37.1715	-116.0489	0.45		20	200	NUCU	Kankakee	SPRINGER	5	0
1966176	06/25/66	17:13:00.1	37.1553	-116.0722	0.32		25		NUCU	Vulcan	SPRINGER	8	0
1966181	06/30/66	22:15:00.1	37.3158	-116.2990	0.82	6.10	365		NUCU	Halfbeak	SPRINGER	10	229
1966209	07/28/66	15:33:30.1	37.1403	-116.0989	0.15			20	NUCU	Saxon	SPRINGER	8	0
1966222	08/10/66	13:16:00.1	37.1687	-116.0477	0.20			20	NUCU	Rovena	SPRINGER	8	0
1966224	08/12/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Tangerine	NV209	2	0
1966255	09/12/66	15:30:00.5	36.8769	-115.9506	0.26	4.60	7.8		NUCU	Derringer	SPRINGER	9	0
1966266	09/23/66	18:00:00.0	37.0209	-116.0364	0.56			20	NUCU	Daiquiri	SPRINGER	8	0
1966272	09/29/66	14:45:30.1	37.1687	-116.0461	0.23	4.10		20	NUCU	Newark	SPRINGER	9	0
1966288	10/15/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Khaki	NV209	2	0
1966309	11/05/66	14:45:00.0	37.1699	-116.0472	0.20			20	NUCU	Simms	SPRINGER	8	0
1966315	11/11/66	12:00:00.1	37.1344	-116.0498	0.24			20	NUCU	Ajax	SPRINGER	8	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1966322	11/18/66	15:02:00.0	37.0428	-116.0103	0.21			20	NUCU	Cerise	SPRINGER	8	0
1966326	11/22/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Vigil	NV209	2	0
1966337	12/03/66	12:15:00.1	31.1421	-89.5699	0.83		.38		NUCU	Sterling	SPRINGER	6	0
1966347	12/13/66	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sidecar	NV209	2	0
1966347	12/13/66	21:00:00.1	36.8773	-115.9379	0.24	4.60		20	NUCU	New Point	SPRINGER	9	0
1966354	12/20/66	15:30:00.1	37.3021	-116.4083	1.22	6.30	870		NUCU	Greeley	SPRINGER	10	93
1967018	01/18/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Rivet I	NV209	3	0
1967019	01/19/67	16:45:00.1	37.1437	-116.1352	0.37	5.40	39		NUCU	Nash	SPRINGER	10	0
1967020	01/20/67	17:40:03.4	37.0999	-116.0038	0.56	5.30	20	200	NUCU	Bourbon	SPRINGER	10	0
1967026	01/26/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Rivet II	NV209	3	0
1967039	02/08/67	15:15:00.1	37.1675	-116.0471	0.26	4.80		20	NUCU	Ward	SPRINGER	9	0
1967054	02/23/67	18:34:00.0	37.0175	-116.0159	0.30	4.40		20	NUCU	Persimmon	SPRINGER	9	0
1967054	02/23/67	18:50:00.0	37.1269	-116.0664	0.73	5.80	20	200	NUCU	Agile	SPRINGER	9	44
1967061	03/02/67	15:00:00.0	37.1659	-116.0487	0.27	4.20		20	NUCU	Rivet III	SPRINGER	9	0
1967062	03/03/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mushroom	NV209	3	0
1967069	03/10/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Fizz	NV209	2	0
1967094	04/04/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Oakland	NV209	2	0
1967096	04/06/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Heilman	NV209	2	0
1967097	04/07/67	15:00:00.0	37.0544	-116.0222	0.27	3.90		20	NUCU	Fawn	SPRINGER	9	0
1967111	04/21/67	15:09:00.0	37.0193	-116.0374	0.24	4.30		20	NUCU	Chocolate	SPRINGER	9	0
1967117	04/27/67	14:45:00.0	37.1388	-116.0632	0.22	3.80		20	NUCU	Effendi	SPRINGER	9	0
1967130	05/10/67	13:40:00.0	37.0779	-115.9953	0.50	5.00	20	200	NUCU	Mickey	SPRINGER	9	0
1967140	05/20/67	15:00:00.0	37.1304	-116.0639	0.75	5.90	250		NUCU	Commodore	SPRINGER	10	68
1967143	05/23/67	14:00:00.0	37.2751	-116.3700	0.98	5.70	155		NUCU	Scotch	SPRINGER	10	81
1967146	05/26/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Absinthe	NV209	2	0
1967146	05/26/67	15:00:01.5	37.2479	-116.4802	0.63	5.54	76		NUCU	Knickerbocker	SPRINGER	10	0
1967173	06/22/67	13:10:00.0	37.1256	-116.0287	0.30			20	NUCU	Switch	SPRINGER	8	0
1967177	06/26/67	16:00:00.0	37.2021	-116.2078	0.38	5.10		20	NUCU	Midi Mist	SPRINGER	8	0
1967180	06/29/67	11:25:00.0	37.0286	-116.0226	0.31	4.60	10		NUCU	Umber	SPRINGER	8	0
1967195	07/14/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Vito	NV209	2	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1967208	07/27/67	13:00:00.0	37.1487	-116.0485	0.48	5.00	20	200	NUCU	Stanley	SPRINGER	8	0
1967216	08/04/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Gibson	NV209	5	0
1967222	08/10/67	14:10:00.0	37.1567	-116.0473	0.47			20	NUCU	Washer	SPRINGER	8	0
1967230	08/18/67	20:12:30.0	37.0122	-116.0365	0.33	4.60		20	NUCU	Bordeaux	SPRINGER	9	0
1967236	08/24/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Lexington	NV209	3	0
1967243	08/31/67	16:30:00.0	37.1776	-116.2089	0.45	5.00		20	NUCU	Door Mist	SPRINGER	8	0
1967250	09/07/67	13:45:00.0	37.1532	-116.0528	0.52	5.00	20	200	NUCU	Yard	SPRINGER	8	0
1967258	09/15/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Gilroy	NV209	2	0
1967264	09/21/67	20:45:00.0	37.1660	-116.0384	0.18		2.2		NUCU	Marvel	SPRINGER	8	49
1967270	09/27/67	17:00:00.0	37.0988	-116.0532	0.67	5.70	20	200	NUCU	Zaza	SPRINGER	8	38
1967291	10/18/67	14:30:00.0	37.1156	-116.0576	0.72	5.70	20	200	NUCU	Lanpher	SPRINGER	8	44
1967298	10/25/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Cognac	NV209	2	0
1967298	10/25/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Worth	NV209	2	0
1967298	10/25/67	14:30:00.1	37.0316	-116.0264	0.30			20	NUCU	Sazerac	SPRINGER	8	0
1967312	11/08/67	15:00:00.0	37.0918	-116.0358	0.67	5.10		20	NUCU	Cobbler	SPRINGER	8	0
1967340	12/06/67	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Polka	NV209	3	0
1967344	12/10/67	19:30:00.1	36.6778	-107.2083	1.29	5.10	29		NUCU	Gasbuggy	SPRINGER	10	67
1967349	12/15/67	15:00:00.0	37.0367	-116.0020	0.33			20	NUCU	Stilt	SPRINGER	8	0
1968018	01/18/68	16:30:00.0	37.1456	-116.0657	0.25		7.4		NUCU	Hupmobile	SPRINGER	8	0
1968019	01/19/68	15:00:00.0	37.1564	-116.0539	0.44		20	200	NUCU	Staccato	SPRINGER	8	0
1968019	01/19/68	18:15:00.1	38.6343	-116.2153	0.98	6.30	200	1000	NUCU	Faultless	SPRINGER	9	76
1968024	01/24/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Brush	NV209	2	0
1968026	01/26/68	16:00:00.1	37.2809	-116.5144	0.05		2.3		NUCU	Cabriolet	SPRINGER	8	92
1968031	01/31/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mallet	NV209	5	0
1968052	02/21/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Torch	NV209	2	0
1968052	02/21/68	15:30:00.0	37.1166	-116.0537	0.64	5.80	20	200	NUCU	Knox	SPRINGER	8	0
1968060	02/29/68	17:08:30.0	37.1846	-116.2114	0.41	5.00		20	NUCU	Dorsal Fin	SPRINGER	8	0
1968065	03/05/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Russet	NV209	2	0
1968072	03/12/68	17:04:00.0	37.0076	-116.3705	0.00		1.08		NUCU_SALVO	Buggy-A	AEC	16	49
1968074	03/14/68	15:19:00.1	37.0477	-116.0108	0.21		1.5		NUCU	Pommard	SPRINGER	6	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1968082	03/22/68	15:00:00.0	37.3326	-116.3107	0.67	5.60	20	200	NUCU	Stinger	SPRINGER	8	45
1968085	03/25/68	18:44:27.0	36.8717	-115.9311	0.26			20	NUCU	Milk Shake	SPRINGER	8	0
1968095	04/04/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bevel	NV209	2	0
1968101	04/10/68	14:00:00.0	37.1544	-116.0789	0.38	4.60	20	200	NUCU_SALVO	Noor	SPRINGER	9	0
1968109	04/18/68	14:05:00.0	37.1525	-116.0370	0.49	4.90	20	200	NUCU	Shuffle	SPRINGER	8	0
1968114	04/23/68	17:01:30.0	37.3377	-116.3756	0.22	3.89		20	NUCU	Scroll	SPRINGER	9	0
1968117	04/26/68	15:00:00.0	37.2954	-116.4557	1.17	6.30	1300		NUCU	Boxcar	SPRINGER	10	196
1968124	05/03/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Hatchet	NV209	5	0
1968129	05/08/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Crock	NV209	3	0
1968138	05/17/68	13:00:00.0	37.1201	-116.0588	0.47	4.70	20	200	NUCU	Clarksmobile	SPRINGER	8	0
1968149	05/28/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Adze	NV209	2	0
1968157	06/05/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Wembley	NV209	3	0
1968158	06/06/68	21:30:00.0	37.1654	-116.0434	0.00			20	NUCU_SALVO	Tub-A	SPRINGER	12	0
1968167	06/15/68	14:00:00.0	37.2649	-116.3146	0.68	5.90	20	200	NUCU	Rickey	SPRINGER	8	0
1968177	06/25/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Funnel	NV209	2	0
1968177	06/25/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sevilla	NV209	2	0
1968180	06/28/68	12:22:00.0	37.2455	-116.4829	0.62	5.30	20	200	NUCU	Chateaugay	SPRINGER	8	0
1968199	07/17/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Spud	NV209	3	0
1968212	07/30/68	13:00:00.0	37.1332	-116.0823	0.38		20	200	NUCU	Tanya	SPRINGER	8	0
1968222	08/09/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Imp	NV209	2	0
1968228	08/15/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Rack	NV209	3	0
1968240	08/27/68	16:30:00.0	36.8772	-115.9311	0.24			20	NUCU	Diana Moon	SPRINGER	8	0
1968242	08/29/68	22:45:00.0	37.2503	-116.3469	0.73	5.90	20	200	NUCU	Sled	SPRINGER	8	70
1968250	09/06/68	14:00:00.1	37.1361	-116.0472	0.58	5.60	20	200	NUCU	Noggin	SPRINGER	9	38
1968256	09/12/68	14:00:00.0	37.0318	-116.0116	0.33	5.80		20	NUCU	Knife A	SPRINGER	8	0
1968261	09/17/68	14:00:00.0	37.1199	-116.1275	0.47	5.10	20	200	NUCU	Stoddard	SPRINGER	8	0
1968268	09/24/68	17:05:00.1	37.2048	-116.2064	0.34	5.00		20	NUCU	Hudson Seal	SPRINGER	8	0
1968277	10/03/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Welder	NV209	2	0
1968277	10/03/68	14:29:00.0	37.0259	-115.9928	0.30			20	NUCU	Knife C	SPRINGER	8	0
1968284	10/10/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Vat	NV209	5	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1968303	10/29/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Hula	NV209	3	0
1968305	10/31/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Bit-A	NV209	6	0
1968305	10/31/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	File	NV209	2	0
1968309	11/04/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Crew-2nd	NV209	2	0
1968309	11/04/68	15:15:00.1	37.1305	-116.0865	0.36	5.00	20	200	NUCU	Crew	SPRINGER	8	0
1968320	11/15/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Auger	NV209	5	0
1968320	11/15/68	15:45:00.0	37.0261	-116.0333	0.36			20	NUCU	Knife B	SPRINGER	8	0
1968325	11/20/68	18:00:00.0	37.0098	-116.2064	0.31	4.90		20	NUCU	Ming Vase	SPRINGER	8	0
1968327	11/22/68	16:19:00.0	37.1399	-116.0423	0.44			20	NUCU	Tinderbox	SPRINGER	8	0
1968343	12/08/68	16:00:00.1	37.3434	-116.5659	0.11	4.80	30		NUCU	Schooner	SPRINGER	8	92
1968347	12/12/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bay Leaf	NV209	5	0
1968347	12/12/68	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Scissors	NV209	2	0
1968347	12/12/68	15:10:00.1	37.1189	-116.0783	0.00			20	NUCU_SALVO	Tyg-A	SPRINGER	13	0
1968354	12/19/68	16:30:00.0	37.2315	-116.4736	1.40	6.30	1150		NUCU	Benham	SPRINGER	10	153
1969015	01/15/69	19:00:00.1	37.1479	-116.0657	0.25		10		NUCU	Packard	SPRINGER	8	0
1969015	01/15/69	19:30:00.0	37.2091	-116.2254	0.52	5.30	20	200	NUCU	Wineskin	SPRINGER	9	0
1969022	01/22/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Shave	NV209	3	0
1969030	01/30/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Biggin	NV209	2	0
1969030	01/30/69	15:00:00.0	37.0533	-116.0293	0.45	4.90	20	200	NUCU	Vise	SPRINGER	9	0
1969035	02/04/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Winch	NV209	2	0
1969035	02/04/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Nipper	NV209	3	0
1969043	02/12/69	16:18:20.9	37.1691	-116.2107	0.41			20	NUCU	Cypress	SPRINGER	7	0
1969077	03/18/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Chatty	NV209	2	0
1969077	03/18/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Valise	NV209	3	0
1969079	03/20/69	18:12:00.0	37.0220	-116.0302	0.30	4.60		20	NUCU	Barsac	SPRINGER	8	0
1969080	03/21/69	14:30:00.0	37.1332	-116.0867	0.46	4.90		100	NUCU	Coffer	SPRINGER	8	0
1969114	04/24/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Gourd-Amber	NV209	4	0
1969120	04/30/69	17:00:00.0	37.0815	-116.0139	0.56	5.30	20	200	NUCU	Blenton	SPRINGER	9	0
1969120	04/30/69	17:00:00.0	37.0903	-116.0056	0.56	5.20	20	200	NUCU	Thistle	SPRINGER	7	0
1969127	05/07/69	13:45:00.0	37.2829	-116.5006	0.60	5.80	20	200	NUCU	Purse	SPRINGER	9	71

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1969135	05/15/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Aliment	NV209	3	0
1969147	05/27/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Ipecac-A	NV209	3	0
1969147	05/27/69	14:15:00.0	37.0751	-115.9953	0.51	5.00	20	200	NUCU	Torrido	SPRINGER	9	0
1969163	06/12/69	14:00:00.0	37.0088	-116.0303	0.30	4.50		20	NUCU	Tapper	SPRINGER	9	0
1969177	06/26/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Bowl-1	NV209	4	0
1969197	07/16/69	13:02:30.0	37.1194	-116.0551	0.41	4.70	20	200	NUCU	Ildrim	SPRINGER	9	0
1969197	07/16/69	14:55:00.0	37.1395	-116.0874	0.55	5.60	20	200	NUCU	Hutch	SPRINGER	9	0
1969226	08/14/69	14:30:00.0	37.1603	-116.0636	0.00			20	NUCU_SALVO	Spider-A	SPRINGER	7	0
1969239	08/27/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Horehound	NV209	2	0
1969239	08/27/69	13:45:00.0	37.0215	-116.0381	0.24	4.70		20	NUCU	Pliers	SPRINGER	9	0
1969253	09/10/69	21:00:00.0	39.4058	-107.9481	2.57	5.30	40		NUCU	Rulison	SPRINGER	9	82
1969255	09/12/69	18:02:20.4	36.8772	-115.9285	0.26	4.50		20	NUCU	Minute Steak	SPRINGER	9	0
1969259	09/16/69	14:30:00.0	37.3141	-116.4607	1.16	6.20		1000	NUCU	Jorum	SPRINGER	9	86
1969263	09/20/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Kyack-A	NV209	4	0
1969274	10/01/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Seaweed-C	NV209	4	0
1969275	10/02/69	22:06:00.0	51.4171	179.1823	1.22	6.40	1000		NUCU	Milrow	SPRINGER	8	168
1969281	10/08/69	14:30:00.1	37.2567	-116.4408	0.62	5.60	200	1000	NUCU	Pipkin	SPRINGER	9	40
1969289	10/16/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Seaweed B	NV209	2	0
1969302	10/29/69	19:30:00.0	37.1215	-116.1278	0.26	5.10	11		NUCU	Cruet	SPRINGER	9	0
1969302	10/29/69	20:00:00.0	37.1353	-116.1359	0.31	5.00	16.7		NUCU_SALVO	Pod-A	SPRINGER	12	0
1969302	10/29/69	22:01:51.0	37.1433	-116.0638	0.62	5.70	110		NUCU	Calabash	SPRINGER	9	52
1969317	11/13/69	15:15:00.1	37.1646	-116.0748	0.16		1.7		NUCU	Scuttle	AEC	7	0
1969325	11/21/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Planer	NV209	2	0
1969325	11/21/69	14:52:00.0	37.0312	-116.0021	0.39	5.00	20	200	NUCU	Piccalilli	SPRINGER	9	0
1969339	12/05/69	17:00:00.0	37.1800	-116.2109	0.42	5.00		20	NUCU	Diesel Train	SPRINGER	9	0
1969344	12/10/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Culantro-A	NV209	3	0
1969344	12/10/69	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Tun-A	NV209	6	0
1969351	12/17/69	15:00:00.0	37.0838	-116.0016	0.55	5.50	20	200	NUCU	Grape A	SPRINGER	9	0
1969351	12/17/69	15:15:00.0	37.0066	-116.0228	0.38	4.80		20	NUCU	Lovage	SPRINGER	9	0
1969352	12/18/69	19:00:00.0	37.1205	-116.0348	0.46	5.20	20	200	NUCU_SALVO	Terrine-White	SPRINGER	10	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1970023	01/23/70	16:30:00.2	37.1374	-116.0368	0.27	4.60		20	NUCU_SALVO	Fob-Green	SPRINGER	11	0
1970030	01/30/70	17:00:00.0	37.0308	-116.0348	0.30	4.60		20	NUCU	Ajo	SPRINGER	9	0
1970035	02/04/70	00:00:00.0	37.0000	-116.0000	0.00		20	200	NUCU	Belen	NV209	2	0
1970035	02/04/70	17:00:00.0	37.0981	-116.0265	0.55	5.60	20	200	NUCU	Grape B	SPRINGER	9	0
1970036	02/05/70	15:00:00.0	37.1640	-116.0388	0.44	4.70	25		NUCU	Labis	SPRINGER	9	0
1970042	02/11/70	19:15:00.0	37.2013	-116.2052	0.40	4.70		20	NUCU	Diana Mist	SPRINGER	9	0
1970056	02/25/70	14:28:38.0	37.0367	-115.9996	0.41	5.20	20	200	NUCU	Cumarin	SPRINGER	9	0
1970057	02/26/70	15:30:00.0	37.1164	-116.0614	0.39	5.30	20	200	NUCU_SALVO	Yannigan-Red	SPRINGER	11	0
1970065	03/06/70	14:24:00.9	37.0231	-116.0918	0.00	4.50	8.7		NUCU	Cyathus	SPRINGER	9	0
1970065	03/06/70	15:00:00.2	37.1396	-116.0368	0.29	4.30		20	NUCU_SALVO	Arabis-Red	SPRINGER	11	0
1970078	03/19/70	14:03:30.0	37.0011	-116.0229	0.30	4.10		20	NUCU	Jal	SPRINGER	9	0
1970082	03/23/70	23:05:00.0	37.0862	-116.0211	0.56	5.50	20	200	NUCU	Shaper	SPRINGER	9	0
1970085	03/26/70	19:00:00.2	37.3005	-116.5341	1.21	6.50	1000		NUCU	Handley	SPRINGER	9	139
1970111	04/21/70	14:30:00.0	37.0549	-115.9881	0.34	4.60	12.7		NUCU	Snubber	SPRINGER	9	0
1970111	04/21/70	15:00:00.0	37.1156	-116.0801	0.40	4.80	20	200	NUCU_SALVO	Can-Green	SPRINGER	10	0
1970121	05/01/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Hod-C (Blue)	NV209	1	0
1970121	05/01/70	14:13:00.0	37.0592	-116.0282	0.39	4.20		20	NUCU	Beebalm	SPRINGER	9	0
1970121	05/01/70	14:40:00.2	37.1330	-116.0341	0.27	4.50		20	NUCU_SALVO	Hod-A (Green)	SPRINGER	10	0
1970125	05/05/70	15:30:00.2	37.2165	-116.1841	0.41	5.20		20	NUCU	Mint Leaf	SPRINGER	9	0
1970132	05/12/70	14:00:00.0	37.0104	-116.2019	0.27			20	NUCU	Diamond Dust	SPRINGER	6	0
1970135	05/15/70	13:30:00.0	37.1619	-116.0389	0.44	5.30	20	200	NUCU_SALVO	Cornice-Yellow	SPRINGER	10	0
1970141	05/21/70	14:00:00.0	37.0289	-115.9919	0.24	3.50		20	NUCU	Manzanas	SPRINGER	9	0
1970141	05/21/70	14:15:00.0	37.0708	-116.0130	0.48	5.10	20	200	NUCU	Morrones	SPRINGER	9	0
1970146	05/26/70	14:16:00.2	37.1826	-116.2134	0.42	5.00		20	NUCU	Hudson Moon	SPRINGER	9	0
1970146	05/26/70	15:00:00.1	37.1134	-116.0623	0.53	5.60	105	20	NUCU_SALVO	Flask-Green	SPRINGER	11	82
1970148	05/28/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Piton-A	NV209	3	0
1970148	05/28/70	12:00:00.2	37.1300	-116.0500	0.00	4.20		20	NUCU	Piton-C	ISC	9	0
1970177	06/26/70	13:00:00.0	37.1139	-116.0861	0.31	4.30		20	NUCU_SALVO	Arnica-Yellow	SPRINGER	10	0
1970286	10/13/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Scree-Acajou	NV209	5	0
1970287	10/14/70	14:30:00.0	37.0707	-116.0051	0.56	5.50	20	200	NUCU	Tijeras	SPRINGER	9	41

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1970301	10/28/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Truchas-Chacon	NV209	7	0
1970309	11/05/70	15:00:00.0	37.0295	-116.0118	0.39	4.90	20	200	NUCU	Abeytas	SPRINGER	9	0
1970323	11/19/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Penasco	NV209	4	0
1970337	12/03/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Carrizozo	NV209	4	0
1970350	12/16/70	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Canjilon	NV209	2	0
1970350	12/16/70	16:00:00.1	37.1002	-116.0079	0.48	5.20	20	200	NUCU	Artesia	SPRINGER	9	0
1970350	12/16/70	16:00:00.2	37.1429	-116.0340	0.00	5.10		20	NUCU_SALVO	Avens-Andorre	SPRINGER	11	0
1970351	12/17/70	16:05:00.2	37.1291	-116.0830	0.66	5.80	220		NUCU	Carpetbag	SPRINGER	9	58
1970352	12/18/70	15:30:00.2	37.1731	-116.0989	0.28	5.20	10		NUCU	Baneberry	SPRINGER	9	0
1971167	06/16/71	14:50:00.0	37.0332	-116.0137	0.30	4.90		20	NUCU	Embudo	SPRINGER	9	0
1971174	06/23/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Dexter	NV209	2	0
1971174	06/23/71	15:30:00.0	37.0220	-116.0227	0.45	4.80	20	200	NUCU	Laguna	SPRINGER	9	0
1971175	06/24/71	14:00:00.2	37.1467	-116.0668	0.52	5.20	20	200	NUCU	Harebell	SPRINGER	9	0
1971180	06/29/71	18:30:00.2	37.1768	-116.2115	0.42	4.90		20	NUCU	Camphor	AEC	6	0
1971182	07/01/71	14:00:00.1	37.0115	-116.2034	0.27			20	NUCU	Diamond Mine	SPRINGER	8	0
1971189	07/08/71	14:00:00.1	37.1101	-116.0514	0.53	5.50	83		NUCU	Miniata	SPRINGER	9	0
1971190	07/09/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bracken	NV209	3	0
1971202	07/21/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Apodaca	NV209	3	0
1971216	08/04/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Barranca	NV209	2	0
1971217	08/05/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Nama-Amarylis	NV209	2	0
1971218	08/06/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Baltic	NV209	2	0
1971230	08/18/71	14:00:00.0	37.0572	-116.0363	0.53	5.40	20	200	NUCU	Algodones	SPRINGER	9	94
1971265	09/22/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Frijoles-Deming	NV209	8	0
1971272	09/29/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Chantilly	NV209	2	0
1971272	09/29/71	14:00:00.0	37.0110	-116.0073	0.38	4.40		20	NUCU	Pederal	SPRINGER	9	0
1971281	10/08/71	14:30:00.2	37.1138	-116.0373	0.38	4.70		20	NUCU	Cathay	SPRINGER	9	0
1971287	10/14/71	14:30:02.5	37.0300	-115.9900	0.00	4.40		20	NUCU	Lagoon	ISC	9	0
1971310	11/06/71	22:00:00.1	51.4719	179.1069	1.79	6.80		5000	NUCU	Cannikin	SPRINGER	9	179
1971328	11/24/71	20:15:00.2	36.8792	-115.9347	0.26			20	NUCU	Diagonal Line	SPRINGER	7	0
1971334	11/30/71	15:45:03.2	37.0500	-116.1400	0.00	4.70		20	NUCU	Parnassia	ISC	9	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1971348	12/14/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Hospah	NV209	2	0
1971348	12/14/71	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Yerba	NV209	2	0
1971348	12/14/71	21:09:59.2	37.1239	-116.0896	0.33	4.70	20	200	NUCU	Chaenactis	SPRINGER	9	0
1972005	01/05/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mescalero	NV209	2	0
1972034	02/03/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Cowles	NV209	5	0
1972048	02/17/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Dianthus	NV209	3	0
1972083	03/23/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sappho	NV209	2	0
1972090	03/30/72	21:00:03.7	36.9200	-116.0500	0.00	4.60		20	NUCU_SALVO	Ocate	ISC	10	0
1972110	04/19/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Jicarilla	NV209	2	0
1972110	04/19/72	16:32:00.2	37.1219	-116.0838	0.33	4.60		20	NUCU	Longchamps	SPRINGER	9	0
1972123	05/02/72	19:15:00.0	37.2077	-116.2088	0.38	5.00		20	NUCU	Misty North	SPRINGER	7	0
1972132	05/11/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Kara	NV209	5	0
1972138	05/17/72	14:10:00.2	37.1206	-116.0879	0.32	4.40		20	NUCU	Zinnia	SPRINGER	9	0
1972140	05/19/72	17:00:00.1	37.0647	-116.0018	0.54	4.90		20	NUCU	Monero	SPRINGER	9	0
1972159	06/07/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Merida	NV209	3	0
1972180	06/28/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Haplopappus	NV209	2	0
1972180	06/28/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Tajique	NV209	2	0
1972180	06/28/72	16:30:04.1	37.1300	-116.1000	0.00			20	NUCU	Capitan	ISC	9	0
1972202	07/20/72	17:16:00.2	37.2145	-116.1834	0.42	5.00		20	NUCU	Diamond Sculls	SPRINGER	9	0
1972207	07/25/72	13:30:03.0	37.0000	-116.2000	0.00	4.00		20	NUCU	Atarque	ISC	9	0
1972222	08/09/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Cebolla	NV209	4	0
1972265	09/21/72	15:30:00.2	37.0821	-116.0383	0.56	5.70	20	200	NUCU	Oscuro	SPRINGER	9	56
1972270	09/26/72	14:30:00.2	37.1214	-116.0857	0.30	4.40	15		NUCU	Delphinium	SPRINGER	9	0
1972314	11/09/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Akbar	NV209	5	0
1972314	11/09/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Arsenate	NV209	3	0
1972322	11/17/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Canna-Umbrinus	NV209	3	0
1972347	12/12/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Tuloso	NV209	3	0
1972349	12/14/72	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Solanum	NV209	2	0
1972356	12/21/72	00:00:00.0	37.0000	-116.0000	0.00		20	200	NUCU_SALVO	Flax-Test	NV209	2	0
1972356	12/21/72	20:15:00.2	37.1399	-116.0833	0.44	5.00		20	NUCU	Flax-Source	SPRINGER	9	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1973045	02/14/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Alumroot	NV209	2	0
1973067	03/08/73	16:10:00.2	37.1036	-116.0267	0.57	5.40	20	200	NUCU	Miera	SPRINGER	9	0
1973082	03/23/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Gazook	NV209	3	0
1973095	04/05/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Natoma	NV209	2	0
1973115	04/25/73	22:25:00.0	37.0048	-116.0284	0.45	4.70		20	NUCU_SALVO	Angus	SPRINGER	10	0
1973116	04/26/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Colmor	NV209	3	0
1973116	04/26/73	17:15:00.2	37.1231	-116.0585	0.56	5.60	90		NUCU	Starwort	SPRINGER	9	42
1973129	05/09/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mesita	NV209	2	0
1973137	05/17/73	16:00:00.1	39.7930	-108.3666	2.04	5.40	33		NUCU_SALVO	Rio Blanco-1	SPRINGER	11	18
1973144	05/24/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Kashan	NV209	2	0
1973144	05/24/73	13:30:02.8	37.2900	-116.1000	0.00	4.80		20	NUCU	Cabresto	ISC	9	0
1973156	06/05/73	17:00:00.2	37.1850	-116.2151	0.39	5.10		20	NUCU	Dido Queen	SPRINGER	9	0
1973157	06/06/73	13:00:00.1	37.2451	-116.3460	1.06	6.10	200	1000	NUCU	Almendro	SPRINGER	9	71
1973172	06/21/73	14:44:59.3	37.0800	-115.9900	0.00	5.30	20	200	NUCU	Potrillo	ISC	8	0
1973179	06/28/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Silene	NV209	3	0
1973179	06/28/73	19:15:12.4	37.1484	-116.0859	0.47	4.90	20	200	NUCU	Portulaca	SPRINGER	9	0
1973275	10/02/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Waller	NV209	2	0
1973275	10/02/73	15:15:00.0	37.2000	-115.8000	0.00			20	NUCU	Polygonum	AEC	5	0
1973285	10/12/73	17:00:00.1	37.2004	-116.2032	0.41	4.80		20	NUCU	Husky Ace	SPRINGER	9	0
1973332	11/28/73	15:30:00.1	37.0110	-116.0245	0.28	4.40		20	NUCU	Bernal	AEC	8	0
1973346	12/12/73	19:00:03.1	36.9300	-116.0300	0.00	4.40		20	NUCU	Pajara	ISC	9	0
1973347	12/13/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Seafoam	NV209	2	0
1973353	12/19/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Elida	NV209	2	0
1973353	12/19/73	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Spar	NV209	2	0
1974010	01/10/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Pinedrops-Sloat	NV209	4	0
1974058	02/27/74	17:00:00.1	37.1043	-116.0528	0.64	5.80	20	200	NUCU	Latir	AEC	8	0
1974073	03/14/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Hulsea	NV209	2	0
1974102	04/12/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sapello	NV209	2	0
1974113	04/23/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Potrero	NV209	3	0
1974121	05/01/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Plomo	NV209	2	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1974128	05/08/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Jib	NV209	2	0
1974142	05/22/74	14:14:59.9	37.0600	-116.1100	0.00	4.20		20	NUCU	Grove	ISC	8	0
1974143	05/23/74	13:38:30.2	37.1245	-116.0789	0.47	4.80	20	200	NUCUG	Fallon	ERDA	8	0
1974157	06/06/74	14:40:00.5	36.9600	-116.0200	0.00	4.40		20	NUCU	Jara	ISC	8	0
1974170	06/19/74	16:00:00.1	37.2103	-116.2073	0.39	5.00		20	NUCU	Ming Blade	AEC	8	0
1974191	07/10/74	16:00:00.1	37.0675	-116.0318	0.64	5.70	20	200	NUCU	Escabosa	AEC	8	43
1974199	07/18/74	14:00:01.2	37.0900	-116.0500	0.00	4.10		20	NUCU_SALVO	Crestlake-Tansan	ISC	9	0
1974226	08/14/74	14:00:00.1	37.0234	-116.0364	0.43	4.60		20	NUCU	Puye	AEC	8	0
1974242	08/30/74	15:00:00.2	37.1525	-116.0833	0.66	5.80	20	200	NUCU	Portmanteau	AEC	8	0
1974268	09/25/74	14:00:00.5	36.9700	-116.0200	0.00	4.40		20	NUCU	Pratt	ISC	9	0
1974269	09/26/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Trumbull	NV209	3	0
1974269	09/26/74	15:05:00.2	37.1326	-116.0684	0.57	5.60	20	200	NUCU	Stanyan	AEC	8	0
1974290	10/17/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Estaca	NV209	2	0
1974301	10/28/74	15:00:00.2	37.2011	-116.2039	0.40			20	NUCU	Hybla Fair	AEC	6	0
1974306	11/02/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Temescal	NV209	2	10
1974330	11/26/74	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Puddle	NV209	2	0
1974350	12/16/74	17:30:00.4	36.8800	-115.9700	0.00	4.30		20	NUCU	Keel	ISC	9	0
1975037	02/06/75	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Teleme	NV209	3	0
1975037	02/06/75	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Portola	NV209	4	0
1975050	02/19/75	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bilge	NV209	2	0
1975059	02/28/75	15:15:00.1	37.1062	-116.0563	0.71	5.70	20	200	NUCU	Topgallant	ERDA	8	93
1975066	03/07/75	15:00:00.2	37.1340	-116.0842	0.60	5.50	20	200	NUCU	Cabrillo	ERDA	8	40
1975095	04/05/75	19:45:00.2	37.1879	-116.2139	0.38	4.90		20	NUCU	Dining Car	ERDA	8	0
1975114	04/24/75	14:10:00.2	37.1157	-116.0874	0.41	4.60	20	200	NUCU	Edam	ERDA	8	0
1975120	04/30/75	15:00:00.1	37.1089	-116.0288	0.57	5.20	20	200	NUCU	Obar	ERDA	8	0
1975134	05/14/75	14:00:00.2	37.2208	-116.4742	0.77	6.00	200	1000	NUCU	Tybo	ERDA	8	105
1975154	06/03/75	14:20:00.2	37.3401	-116.5229	0.73	5.90	20	200	NUCU	Stilton	ERDA	8	100
1975154	06/03/75	14:40:00.1	37.0948	-116.0361	0.64	5.70	20	200	NUCU	Mizzen	ERDA	8	133
1975162	06/11/75	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Alviso	NV209	2	0
1975169	06/18/75	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Futtock	NV209	2	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1975170	06/19/75	13:00:00.1	37.3503	-116.3202	0.91	6.10	200	1000	NUCU	Mast	ERDA	8	112
1975177	06/26/75	12:30:00.2	37.2789	-116.3686	1.31	6.20	200	1000	NUCU	Camembert	ERDA	8	52
1975249	09/06/75	17:00:00.1	37.0236	-116.0291	0.43	4.60		20	NUCU	Marsh	ERDA	8	0
1975297	10/24/75	17:11:26.1	37.2216	-116.1797	0.35	4.70		20	NUCU	Husky Pup	ERDA	8	0
1975301	10/28/75	14:30:00.2	37.2901	-116.4115	1.27	6.40	200	1000	NUCU	Kasseri	ERDA	8	80
1975322	11/18/75	15:30:00.4	36.9900	-116.0400	0.00	4.40		20	NUCU	Deck	ISC	8	0
1975324	11/20/75	15:00:00.1	37.2250	-116.3676	0.82	6.00	200	1000	NUCU	Inlet	ERDA	8	39
1975330	11/26/75	15:30:00.2	37.1173	-116.0189	0.33	5.00		20	NUCU	Leyden	ERDA	8	0
1975354	12/20/75	20:00:00.2	37.1276	-116.0616	0.72	5.70	20	200	NUCU	Chiberta	ERDA	8	57
1976003	01/03/76	19:15:00.2	37.2966	-116.3332	1.45	6.20	200	1000	NUCU	Muenster	ERDA	8	109
1976035	02/04/76	14:20:00.1	37.0693	-116.0302	0.64	5.80	20	200	NUCU	Keelson	ERDA	8	129
1976035	02/04/76	14:40:00.2	37.1066	-116.0374	0.66	5.70	20	200	NUCU	Esrom	ERDA	8	164
1976043	02/12/76	14:45:00.2	37.2714	-116.4884	1.22	6.30	200	1000	NUCU	Fontina	ERDA	8	92
1976045	02/14/76	11:30:00.2	37.2426	-116.4202	1.17	6.00	200	500	NUCU	Cheshire	ERDA	8	113
1976057	02/26/76	14:50:03.0	36.9000	-115.9900	0.00	4.20		20	NUCU	Shallows	ISC	7	39
1976069	03/09/76	14:00:00.1	37.3100	-116.3642	0.87	6.00	200	500	NUCU	Estuary	ERDA	8	142
1976074	03/14/76	12:30:00.2	37.3060	-116.4715	1.27	6.30	500	1000	NUCU	Colby	ERDA	7	188
1976077	03/17/76	14:15:00.1	37.2559	-116.3119	0.88	6.10	200	500	NUCU	Pool	ERDA	8	135
1976077	03/17/76	14:45:00.1	37.1073	-116.0525	0.78	5.80	200	500	NUCU	Strait	ERDA	8	159
1976133	05/12/76	19:50:00.2	37.2091	-116.2125	0.40	4.90		20	NUCU	Mighty Epic	ERDA	8	46
1976141	05/20/76	17:30:03.3	37.2700	-116.3300	0.00			20	NUCU	Rivoli	ISC	7	47
1976209	07/27/76	20:30:00.1	37.0754	-116.0438	0.64	5.30	20	150	NUCU	Billet	ERDA	8	36
1976239	08/26/76	14:30:00.2	37.1250	-116.0820	0.54	5.30	20	150	NUCUG	Banon	ERDA	8	27
1976280	10/06/76	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Gouda	NV209	3	0
1976315	11/10/76	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sprit	NV209	2	0
1976328	11/23/76	15:15:00.2	37.1717	-116.0527	0.32			20	NUCU	Chevre	ERDA	8	46
1976343	12/08/76	14:49:30.1	37.0793	-116.0016	0.43	4.90		20	NUCU	Redmud	ERDA	8	34
1976356	12/21/76	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Sutter	NV209	2	4
1976356	12/21/76	15:09:00.2	37.1239	-116.0675	0.33			20	NUCU	Asiago	ERDA	8	20
1976363	12/28/76	18:00:00.1	37.1005	-116.0365	0.64	5.50	20	150	NUCU	Rudder	ERDA	8	17

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1977047	02/16/77	17:52:59.9	37.0000	-116.0700	0.00	4.60		20	NUCU_SALVO	Cove	ISC	8	23
1977067	03/08/77	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Dofino	NV209	4	0
1977095	04/05/77	15:00:00.2	37.1202	-116.0623	0.69	5.60	20	150	NUCU	Marsilly	ERDA	8	74
1977117	04/27/77	15:00:00.1	37.0948	-116.0279	0.59	5.40	20	150	NUCU	Bulkhead	ERDA	8	100
1977145	05/25/77	17:00:00.1	37.0943	-116.0449	0.56	5.30	20	150	NUCU	Crewline	ERDA	8	82
1977153	06/02/77	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Forefoot	NV209	2	0
1977209	07/28/77	14:07:00.4	37.1100	-116.0800	0.00			20	NUCU	Carnelian	ISC	7	52
1977216	08/04/77	16:40:00.1	37.0866	-116.0069	0.52	5.10	20	150	NUCU	Strake	ERDA	8	33
1977228	08/16/77	14:41:00.6	37.1500	-116.0600	0.00			20	NUCU	Flotost	ISC	7	36
1977228	08/16/77	15:49:00.3	37.1500	-116.0600	0.00			20	NUCU_SALVO	Gruyere	ISC	8	57
1977231	08/19/77	17:31:59.8	37.0100	-115.9600	0.00			20	NUCU	Scupper	ISC	7	107
1977231	08/19/77	17:55:00.1	37.1100	-116.0545	0.70	5.60	20	150	NUCU	Scantling	ERDA	8	329
1977258	09/15/77	14:36:30.1	37.0328	-116.0431	0.38	4.50		20	NUCU	Ebbtide	ERDA	8	38
1977270	09/27/77	14:00:00.2	37.1512	-116.0676	0.53	4.80	20	150	NUCU	Coulommiers	ERDA	8	46
1977299	10/26/77	14:15:00.1	37.0076	-116.0167	0.38	4.40		20	NUCU	Bobstay	ERDA	8	34
1977305	11/01/77	18:06:00.1	37.1878	-116.2130	0.39	4.70		20	NUCU	Hybla Gold	ERDA	8	38
1977313	11/09/77	22:00:00.1	37.0721	-116.0500	0.70	5.80	20	150	NUCU	Sandreef	ERDA	8	173
1977321	11/17/77	19:30:00.1	37.0206	-116.0251	0.37	4.70		20	NUCU	Seamount	ERDA	8	36
1977348	12/14/77	15:00:02.6	36.9600	-116.0400	0.00			20	NUCU	Rib	ISC	7	69
1977348	12/14/77	15:30:00.2	37.1359	-116.0860	0.67	5.70	20	150	NUCU	Farallones	ERDA	8	300
1978044	02/13/78	21:53:00.2	37.1261	-116.0317	0.32	3.80		20	NUCU	Campos	DOE	9	42
1978054	02/23/78	17:00:00.2	37.1237	-116.0638	0.66	5.60	20	150	NUCU	Reblochon	DOE	8	147
1978075	03/16/78	15:00:00.1	37.0100	-116.1000	0.00	4.00		20	NUCU	Karab	ISC	9	33
1978082	03/23/78	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Topmast	NV209	2	17
1978082	03/23/78	16:30:00.2	37.1018	-116.0511	0.64	5.60	20	150	NUCU	Iceberg	DOE	8	155
1978101	04/11/78	15:30:00.2	37.2996	-116.3267	0.63	5.40	20	150	NUCU	fondutta	DOE	9	150
1978101	04/11/78	17:45:00.1	37.2335	-116.3685	0.67	5.50	20	150	NUCUG	Fondutta	DOE	9	244
1978115	04/25/78	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Asco	NV209	2	0
1978130	05/10/78	00:00:00.0	37.0878	-116.0526	0.64		0	0	NUCU	Transom	DOE	4	48
1978152	06/01/78	17:00:01.1	37.0000	-116.2500	0.00			20	NUCU	Jackpots	ISC	9	49

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1978188	07/07/78	13:59:59.5	37.0800	-116.0400	0.00	4.00		20	NUCU	Satz	ISC	9	41
1978193	07/12/78	17:00:00.1	37.0787	-116.0438	0.56	5.60	20	150	NUCU	Lowball	DOE	8	210
1978243	08/31/78	14:00:00.2	37.2759	-116.3573	0.68	5.60	20	150	NUCU	Panir	DOE	8	188
1978256	09/13/78	15:15:00.2	37.2088	-116.2108	0.39	4.60		20	NUCU	Diablo Hawk	DOE	8	50
1978270	09/27/78	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Cremino	NV209	4	46
1978270	09/27/78	17:00:00.1	37.0798	-116.0513	0.44	5.00	20	150	NUCU	Draughts	DOE	8	194
1978270	09/27/78	17:20:00.1	37.0739	-116.0198	0.64	5.80	20	150	NUCU	Rummy	DOE	8	365
1978306	11/02/78	15:25:00.2	37.2879	-116.2975	0.58	4.20		20	NUCU	Emmenthal	DOE	8	66
1978322	11/18/78	19:00:00.2	37.1269	-116.0839	0.54	5.10	20	150	NUCUG	Quargel	DOE	8	128
1978335	12/01/78	17:07:29.8	37.0100	-116.0400	0.00			20	NUCU	Concentration	ISC	9	76
1978350	12/16/78	15:30:00.2	37.2734	-116.4103	0.69	5.60	20	150	NUCU	Farm	DOE	8	125
1979024	01/24/79	18:00:00.1	37.1054	-116.0117	0.33	4.50		20	NUCU	Baccarat	DOE	8	63
1979039	02/08/79	20:00:00.1	37.1025	-116.0548	0.58	5.50	20	150	NUCU	Quinella	DOE	8	138
1979046	02/15/79	18:05:00.2	37.1520	-116.0718	0.54	4.90	20	150	NUCU	Kloster	DOE	8	62
1979073	03/14/79	18:30:00.1	37.0278	-116.0398	0.37	4.40		20	NUCU	Memory	DOE	8	48
1979131	05/11/79	15:59:59.8	36.9600	-116.0100	0.00			20	NUCU	Freezeout	ISC	9	47
1979162	06/11/79	14:00:00.2	37.2897	-116.4553	0.68	5.50	20	150	NUCU	Pepato	DOE	8	171
1979171	06/20/79	15:00:13.5	37.1076	-116.0151	0.34	4.00		20	NUCU	Chess	DOE	8	52
1979179	06/28/79	14:44:00.2	37.1432	-116.0875	0.54	5.00	20	150	NUCU	Fajy	DOE	8	55
1979215	08/03/79	15:07:30.2	37.0840	-116.0699	0.45	4.60	20	150	NUCU	Burzet	DOE	8	42
1979220	08/08/79	15:00:00.1	37.0147	-116.0080	0.40	4.90	20	150	NUCU	Offshore	DOE	8	57
1979241	08/29/79	15:08:00.2	37.1212	-116.0666	0.46	4.80	20	150	NUCUG	Nessel	DOE	8	57
1979249	09/06/79	15:00:00.1	37.0881	-116.0528	0.64	5.80	140		NUCU	Hearts	DOE	8	238
1979251	09/08/79	17:02:00.1	37.1550	-116.0382	0.20			20	NUCU	Pera	DOE	8	74
1979269	09/26/79	15:00:00.1	37.2291	-116.3641	0.64	5.60	20	150	NUCU	Sheepshead	DOE	8	169
1979333	11/29/79	15:00:00.1	36.9940	-116.0241	0.23	3.80		20	NUCU	Backgammon	DOE	8	52
1979348	12/14/79	18:00:00.1	37.1374	-116.0631	0.21			20	NUCU	Azul	DOE	8	52
1980059	02/28/80	15:00:00.1	37.1265	-116.0885	0.37	4.40		20	NUCU	Tarko	DOE	8	62
1980068	03/08/80	15:35:00.1	37.1799	-116.0831	0.27	3.90		20	NUCU	Norbo	DOE	8	62
1980094	04/03/80	14:00:00.1	37.1499	-116.0823	0.42	4.80	20	150	NUCU	Liptauer	DOE	8	60

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1980107	04/16/80	20:00:00.1	37.1011	-116.0305	0.58	5.30	20	150	NUCU	Pyramid	DOE	8	143
1980117	04/26/80	17:00:00.1	37.2484	-116.4224	0.63	5.50	20	150	NUCUG	Colwick	DOE	8	103
1980123	05/02/80	18:46:30.1	37.0560	-116.0190	0.35	4.50		20	NUCU	Canfield	DOE	8	53
1980143	05/22/80	13:00:00.1	37.0031	-116.0314	0.34			20	NUCU	Flora	DOE	8	53
1980164	06/12/80	17:15:00.1	37.2817	-116.4539	0.65	5.60	20	150	NUCU	Kash	DOE	8	187
1980176	06/24/80	15:10:00.1	37.0233	-116.0341	0.32	4.50		20	NUCU	Huron King	DOE	8	59
1980207	07/25/80	19:05:00.1	37.2563	-116.4774	0.68	5.60	20	150	NUCU	Tafi	DOE	8	163
1980213	07/31/80	18:19:00.1	37.0130	-116.0227	0.37	4.30		20	NUCU	Verdello	DOE	8	61
1980269	09/25/80	14:45:00.1	37.0562	-116.0481	0.38	4.60	20	150	NUCU	Bonarda	DOE	8	94
1980269	09/25/80	15:26:30.1	37.1159	-116.0646	0.42		1.07		NUCU	Riola	DOE	8	94
1980298	10/24/80	19:15:00.1	37.0746	-115.9993	0.43	4.70		20	NUCUG	Dutchess	DOE	8	56
1980305	10/31/80	18:00:00.1	37.2113	-116.2054	0.39	4.70		20	NUCU	Miners Iron	DOE	8	49
1980319	11/14/80	16:50:00.1	37.1110	-116.0187	0.32	4.10		20	NUCU	Dauphin	DOE	8	62
1980352	12/17/80	15:10:00.1	37.3248	-116.3117	0.57	5.10	20	150	NUCUG	Serpa	DOE	8	79
1981015	01/15/81	20:25:00.1	37.0871	-116.0448	0.56	5.70	20	150	NUCU	Baseball	DOE	8	68
1981036	02/05/81	18:00:00.1	37.0109	-116.0322	0.35			20	NUCU	Clairette	DOE	8	65
1981056	02/25/81	15:00:00.8	37.1819	-116.0842	0.20			20	NUCU	Seco	DOE	6	65
1981120	04/30/81	14:35:00.1	37.1773	-116.0848	0.32			20	NUCU	Vide	DOE	8	79
1981149	05/29/81	16:00:00.1	37.1019	-116.0041	0.32	4.20		20	NUCU	Aligote	DOE	8	60
1981157	06/06/81	18:00:00.1	37.3034	-116.3256	0.64	5.60	20	150	NUCU	Harzer	DOE	8	106
1981191	07/10/81	14:00:00.1	37.1286	-116.0338	0.34			20	NUCU	Niza	DOE	8	63
1981197	07/16/81	15:00:00.1	37.0887	-116.0194	0.20			20	NUCU	Pineau	DOE	8	62
1981217	08/05/81	13:41:00.1	37.1537	-116.0351	0.20			20	NUCU	Havarti	DOE	6	45
1981239	08/27/81	14:31:00.1	37.1604	-116.0665	0.29			20	NUCU	Islay	DOE	7	64
1981247	09/04/81	15:00:00.1	37.0581	-116.0481	0.30			20	NUCU	Trebbiano	DOE	8	62
1981267	09/24/81	15:00:00.1	37.0085	-116.0238	0.21			20	NUCU	Cernada	DOE	8	59
1981274	10/01/81	19:00:00.1	37.0816	-116.0088	0.47	5.10	20	150	NUCU	Paliza	DOE	8	76
1981315	11/11/81	20:00:00.0	37.0763	-116.0685	0.45	4.90	20	150	NUCU	Tilci	DOE	8	80
1981316	11/12/81	15:00:00.1	37.1082	-116.0490	0.52	5.40	20	150	NUCUG	Rousanne	DOE	8	75
1981337	12/03/81	15:00:00.1	37.1484	-116.0708	0.49	4.80	20	150	NUCU	Akavi	DOE	8	69

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1981350	12/16/81	21:05:00.1	37.1145	-116.1229	0.34	4.40		20	NUCU	Caboc	DOE	8	74
1982028	01/28/82	16:00:00.1	37.0913	-116.0512	0.64	5.90	139		NUCU	Jornada	DOE	8	88
1982043	02/12/82	14:55:00.1	37.2243	-116.4627	0.64	5.40	20	150	NUCU	Molbo	DOE	8	138
1982043	02/12/82	15:25:00.1	37.3480	-116.3161	0.64	5.60	20	150	NUCU	Hosta	DOE	8	139
1982107	04/17/82	18:00:00.1	37.0168	-116.0099	0.36	4.50		20	NUCU	Tenaja	DOE	8	119
1982115	04/25/82	18:05:00.1	37.2558	-116.4224	0.57	5.40	20	150	NUCUG	Gibne	DOE	8	106
1982126	05/06/82	20:00:00.1	37.1168	-116.1269	0.34	4.30		20	NUCU	Kryddost	DOE	8	103
1982127	05/07/82	18:17:00.1	37.0691	-116.0455	0.56	5.70	20	150	NUCU	Bouschet	DOE	8	111
1982167	06/16/82	14:00:00.8	37.1142	-116.0166	0.29			20	NUCU	Kesti	DOE	8	100
1982175	06/24/82	14:15:00.1	37.2362	-116.3702	0.20	5.60	20	150	NUCU	Nebbiolo	DOE	8	122
1982210	07/29/82	20:05:00.1	37.1023	-116.0750	0.12	4.50	20	150	NUCU	Monterey	DOE	8	124
1982217	08/05/82	14:00:00.1	37.0842	-116.0065	0.20	5.70	138		NUCU	Atrisco	DOE	8	159
1982223	08/11/82	15:00:00.0	37.1898	-116.0477	0.07			20	NUCU	Queso	DOE	8	83
1982245	09/02/82	14:00:00.1	37.0197	-116.0157	0.07			20	NUCU	Cerro	DOE	8	84
1982266	09/23/82	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Diamond Ace	NV209	1	20
1982266	09/23/82	16:00:00.1	37.2120	-116.2068	0.12	4.90		20	NUCU	Huron Landing	DOE	8	136
1982266	09/23/82	17:00:00.1	37.1748	-116.0878	0.14	4.90	20	150	NUCU	Frisco	DOE	8	140
1982272	09/29/82	13:30:00.1	37.0913	-116.0449	0.17			150	NUCU	Borrego	DOE	8	88
1982316	11/12/82	19:17:00.1	37.0237	-116.0321	0.37	4.40		20	NUCU	Seyval	DOE	8	127
1982344	12/10/82	15:20:00.1	37.0302	-116.0719	0.41	4.80	20	150	NUCU	Manteca	DOE	8	116
1983042	02/11/83	16:00:00.1	37.0506	-116.0453	0.00			20	NUCU	Coalora	DOE	8	109
1983048	02/17/83	17:00:00.1	37.1628	-116.0633	0.00	4.00		20	NUCU	Cheedam	DOE	8	87
1983085	03/26/83	20:20:00.1	37.3007	-116.4600	0.00	5.20	20	150	NUCU	Cabra	DOE	8	110
1983104	04/14/83	19:05:00.1	37.0728	-116.0460	0.00	5.70		150	NUCU	Turquoise	DOE	8	129
1983112	04/22/83	13:53:00.1	37.1115	-116.0224	0.00	4.00		20	NUCUG	Armada	DOE	8	121
1983125	05/05/83	15:20:00.1	37.0123	-116.0892	0.00	4.50		20	NUCU	Crowdie	DOE	8	105
1983146	05/26/83	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mini Jade	NV209	3	13
1983146	05/26/83	15:00:00.1	37.1029	-116.0057	0.00	4.50		20	NUCU	Fahada	DOE	7	114
1983160	06/09/83	17:10:00.1	37.1576	-116.0892	0.00	4.50		20	NUCU	Danablu	DOE	8	134
1983215	08/03/83	13:33:00.1	37.1190	-116.0889	0.00	4.20		20	NUCU	Laban	DOE	8	126

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1983223	08/11/83	14:00:00.1	36.9977	-116.0027	0.00	4.40		20	NUCU	Sabado	DOE	8	126
1983239	08/27/83	14:00:00.3	37.2000	-116.0300	0.00	4.10		20	NUCU	Jarlsberg	ISC	8	0
1983244	09/01/83	14:00:00.1	37.2728	-116.3550	0.00	5.50	143		NUCU	Chancellor	DOE	8	137
1983264	09/21/83	15:00:00.1	37.2097	-116.2093	0.00			20	NUCU	Tomme/Midnight Zephyr	DOE	8	122
1983264	09/21/83	16:24:59.7	37.1130	-116.0430	0.00			20	NUCU_SALVO	Branco	PDE	7	12
1983265	09/22/83	15:00:00.1	37.1056	-116.0494	0.00			150	NUCU	Techado	DOE	8	122
1983272	09/29/83	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Navata	NV209	2	0
1983343	12/09/83	16:00:00.4	36.9800	-116.0200	0.00			20	NUCU	Muggins	ISC	8	0
1983350	12/16/83	18:30:00.1	37.1405	-116.0721	0.00	5.20	20	150	NUCU	Romano	DOE	8	99
1984031	01/31/84	15:30:00.1	37.1127	-116.1217	0.00	4.10	20	150	NUCU	Gorbea	DOE	8	187
1984046	02/15/84	17:00:00.1	37.2214	-116.1811	0.00	5.10		20	NUCU	Midas Myth/Milagro	DOE	8	120
1984061	03/01/84	17:45:00.1	37.0658	-116.0463	0.00	5.90	20	150	NUCU	Tortugas	DOE	8	200
1984091	03/31/84	14:30:00.1	37.1464	-116.0841	0.00	4.50		20	NUCU	Agrini	DOE	8	167
1984122	05/01/84	19:05:00.1	37.1062	-116.0224	0.00	5.40	20	150	NUCUG	Mundo	DOE	8	277
1984123	05/02/84	13:49:59.8	37.1900	-116.0200	0.00			20	NUCU	Orkney	ISC	9	0
1984137	05/16/84	15:59:58.9	37.0900	-115.9700	0.00			20	NUCU	Bellow	ISC	9	0
1984152	05/31/84	13:04:00.1	37.1031	-116.0480	0.00	5.80	20	150	NUCU	Caprock	DOE	8	222
1984172	06/20/84	15:15:00.1	37.0004	-116.0431	0.00	4.70	20	150	NUCU	Duoro	DOE	8	314
1984194	07/12/84	14:00:00.3	37.1800	-116.0100	0.00	3.60		20	NUCU	Normanna	ISC	9	0
1984207	07/25/84	15:30:00.1	37.2678	-116.4106	0.00	5.40	20	150	NUCU	Kappeli	DOE	8	152
1984215	08/02/84	15:00:00.1	37.0171	-116.0076	0.00	4.70		20	NUCU	Correo	DOE	8	212
1984243	08/30/84	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Wexford	NV209	2	14
1984243	08/30/84	14:45:00.1	37.0898	-115.9980	0.00	4.90		20	NUCU	Dolcetto	DOE	8	102
1984257	09/13/84	00:00:00.0	37.0867	-116.0712	0.00	5.00	20	150	NUCU	Breton	DOE	8	323
1984276	10/02/84	18:13:59.2	37.0800	-116.0000	0.00	4.20		20	NUCU	Vermejo	ISC	9	0
1984315	11/10/84	16:40:00.1	37.0001	-116.0174	0.00	4.50		20	NUCU	Villita	DOE	8	658
1984344	12/09/84	19:40:00.1	37.2701	-116.4976	0.00	5.50	20	150	NUCUG	Egmont	DOE	8	181
1984350	12/15/84	00:00:00.0	37.2811	-116.3054	0.00	5.40	20	150	NUCU	Tierra	DOE	8	191
1984355	12/20/84	16:20:00.2	36.9700	-116.0100	0.00	4.20		20	NUCU	Minero	ISC	9	0
1985074	03/15/85	16:31:00.1	37.0581	-116.0453	0.00	4.80	20	150	NUCU	Vaughn	DOE	8	169

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1985082	03/23/85	18:30:00.1	37.1800	-116.0890	0.00	5.30	20	150	NUCU	Cottage	DOE	8	223
1985092	04/02/85	20:00:00.1	37.0948	-116.0323	0.00	5.80	20	150	NUCU	Hermosa	DOE	8	214
1985096	04/06/85	23:15:00.1	37.2008	-116.2072	0.00	4.80		20	NUCU	Misty Rain	DOE	8	184
1985122	05/02/85	15:20:00.1	37.2534	-116.3252	0.00	5.70	20	150	NUCU	Towanda	DOE	8	231
1985163	06/12/85	15:15:00.1	37.2479	-116.4891	0.00	5.50	20	150	NUCU	Salut	DOE	8	231
1985163	06/12/85	17:30:00.1	37.0883	-116.0839	0.00	4.60		20	NUCU	Ville	DOE	8	232
1985177	06/26/85	18:03:00.1	37.1241	-116.1220	0.00	4.30		20	NUCU	Maribo	DOE	8	259
1985206	07/25/85	14:00:00.1	37.2973	-116.4381	0.00	5.20	20	150	NUCU	Serena	DOE	8	572
1985226	08/14/85	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Cebrero	NV209	3	0
1985229	08/17/85	16:25:00.1	37.0023	-116.0430	0.00	4.60		20	NUCU	Chamita	DOE	8	129
1985270	09/27/85	14:15:00.1	37.0898	-116.0018	0.00	4.70		20	NUCU	Ponil	DOE	8	223
1985282	10/09/85	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Mill Yard	NV209	2	0
1985282	10/09/85	23:20:00.1	37.2097	-116.2101	0.00	4.20		20	NUCU	Diamond Beech	DOE	8	776
1985289	10/16/85	21:35:00.1	37.1099	-116.1214	0.00	4.70	20	150	NUCU	Roquefort	DOE	8	379
1985303	10/30/85	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Abo	NV209	2	0
1985339	12/05/85	15:00:00.1	37.0533	-116.0454	0.00	5.70	20	150	NUCUG	Kinibito	DOE	8	265
1985362	12/28/85	19:01:00.1	37.2378	-116.4727	0.00	5.30	20	150	NUCU	Goldstone	DOE	8	266
1986081	03/22/86	16:15:00.1	37.0830	-116.0661	0.00	5.20	29		NUCU	Glencoe	DOE	7	268
1986100	04/10/86	14:08:30.1	37.2183	-116.1831	0.00	5.00		20	NUCU	Mighty Oak	DOE	7	305
1986110	04/20/86	00:00:00.0	37.0000	-116.0000	0.00	4.00		20	NUCU	Mogollon	NV209	5	0
1986112	04/22/86	14:30:00.1	37.2641	-116.4402	0.00	5.40	20	150	NUCU	Jefferson	DOE	7	293
1986141	05/21/86	13:59:00.1	37.1250	-116.0604	0.00			20	NUCU	Panamint	DOE	7	318
1986156	06/05/86	15:04:00.1	37.0983	-116.0155	0.00	5.40	20	150	NUCU	Tajo	DOE	7	329
1986176	06/25/86	00:00:00.0	37.2646	-116.4993	0.00	5.60	20	150	NUCUG	Darwin	DOE	7	242
1986198	07/17/86	21:00:00.1	37.2787	-116.3556	0.00	5.70	119		NUCU	Cybar	DOE	8	341
1986205	07/24/86	15:05:00.1	37.1427	-116.0711	0.00	4.60		20	NUCU	Cornucopia	DOE	8	221
1986247	09/04/86	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Galveston	NV209	3	0
1986254	09/11/86	14:57:00.1	37.0691	-116.0497	0.00			20	NUCU	Aleman	DOE	7	262
1986273	09/30/86	22:30:00.1	37.3001	-116.3074	0.00	5.60	20	150	NUCU	Labquark	DOE	7	252
1986289	10/16/86	19:25:00.1	37.2202	-116.4616	0.00	5.60	20	150	NUCU	Belmont	DOE	7	207

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1986318	11/14/86	16:00:00.1	37.1004	-116.0481	0.00	5.80	20	150	NUCU	Gascon	DOE	8	324
1986347	12/13/86	17:50:05.1	37.2630	-116.4117	0.00	5.60	20	150	NUCU	Bodie	DOE	8	181
1987034	02/03/87	15:20:00.1	37.1811	-116.0484	0.00			20	NUCU_SALVO	Hazebrook-Emerald (Green)	DOE	10	151
1987042	02/11/87	16:45:00.1	37.0107	-116.0447	0.00	4.50		20	NUCU	Tornero	DOE	9	0
1987077	03/18/87	18:28:00.1	37.2102	-116.2086	0.00	4.30		20	NUCU	Middle Note	DOE	8	148
1987108	04/18/87	13:40:00.6	37.2479	-116.5091	0.00	5.50	20	150	NUCU	Delamar	DOE	10	212
1987112	04/22/87	22:00:00.1	36.9831	-116.0046	0.00	4.20		20	NUCU	Presidio	DOE	8	240
1987120	04/30/87	13:30:00.1	37.2330	-116.4231	0.00	5.50	20	150	NUCU	Hardin	DOE	9	340
1987169	06/18/87	15:20:00.1	37.1936	-116.0350	0.00			20	NUCU	Brie	DOE	8	157
1987171	06/20/87	00:00:00.0	37.2200	-116.1778	0.00			20	NUCU	Mission Ghost	DOE	8	134
1987181	06/30/87	16:05:00.1	36.9986	-116.0431	0.00	4.60		20	NUCU	Panchuela	DOE	8	321
1987197	07/16/87	19:00:00.1	37.1036	-116.0234	0.00	4.90	20	150	NUCUG	Midland	DOE	8	260
1987225	08/13/87	14:00:00.1	37.0610	-116.0453	0.00	5.90	20	150	NUCU	Tahoka	DOE	9	256
1987267	09/24/87	15:00:00.1	37.2280	-116.3747	0.00	5.70	20	150	NUCU	Lockney	DOE	8	230
1987296	10/23/87	16:00:00.1	37.1419	-116.0787	0.00	5.20	20	150	NUCU	Borate	DOE	9	320
1987335	12/01/87	16:30:00.1	36.9964	-116.0045	0.00			20	NUCU	Waco	DOE	9	122
1987336	12/02/87	16:30:00.1	37.2347	-116.1634	0.00	4.10		20	NUCU	Mission Cyber	DOE	9	161
1988046	02/15/88	18:10:00.1	37.3144	-116.4715	0.00	5.30	20	150	NUCU	Kernville	DOE	8	226
1988098	04/07/88	17:15:00.1	37.0132	-116.0443	0.00	4.10		20	NUCU	Abilene	DOE	7	176
1988134	05/13/88	15:35:00.1	37.1244	-116.0721	0.00	4.80		150	NUCU	Schellbourne	DOE	8	48
1988142	05/21/88	22:30:00.1	37.0325	-115.9873	0.00	4.30		150	NUCU	Laredo	DOE	7	33
1988154	06/02/88	13:00:00.1	37.2601	-116.4411	0.00	5.40		150	NUCU	Comstock	DOE	8	81
1988174	06/22/88	00:00:00.0	37.0000	-116.0000	0.00			150	NUCU	Nightingale	NV209	1	9
1988174	06/22/88	14:00:00.1	37.1662	-116.0722	0.00			150	NUCU	Rhyolite	DOE	7	39
1988189	07/07/88	15:05:30.1	37.2524	-116.3767	0.00	5.70		150	NUCU	Alamo	DOE	9	93
1988230	08/17/88	17:00:00.1	37.2972	-116.3065	0.00	5.60		150	NUCU	Kearsarge	DOE	9	194
1988236	08/23/88	18:29:59.7	36.9900	-116.0100	0.00	4.10		20	NUCU_SALVO	Harlingen-A	ISC	8	51
1988243	08/30/88	18:00:00.1	37.0859	-116.0685	0.00	5.10		150	NUCU	Bullfrog	DOE	8	75
1988287	10/13/88	14:00:00.1	37.0890	-116.0493	0.00	5.90		150	NUCU	Dalhart	DOE	9	39
1988314	11/09/88	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Monahans-A	NV209	3	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1988344	12/09/88	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Kawich A-White	NV209	3	0
1988345	12/10/88	20:30:00.1	37.1990	-116.2094	0.00	5.00		150	NUCU	Misty Echo	DOE	8	66
1989041	02/10/89	20:06:00.1	37.0768	-116.0006	0.00	5.20	20	150	NUCU	Texarkana	DOE	9	78
1989055	02/24/89	16:15:00.1	37.1285	-116.1220	0.00	4.40		20	NUCU_SALVO	Kawich-Red	DOE	8	51
1989068	03/09/89	14:05:00.1	37.1428	-116.0669	0.00	5.00	20	150	NUCU	Ingot	DOE	9	51
1989135	05/15/89	13:10:00.1	37.1076	-116.1209	0.00	4.40		20	NUCU_SALVO	Palisade-1	DOE	10	0
1989146	05/26/89	18:07:00.0	37.0859	-116.0551	0.00	3.70		20	NUCU	Tulia	DOE	7	51
1989173	06/22/89	21:15:00.8	37.2829	-116.4123	0.00	5.30	20	150	NUCU	Contact	DOE	9	36
1989178	06/27/89	15:30:00.0	37.2755	-116.3536	0.00	4.90	20	150	NUCU	Amarillo	DOE	8	57
1989257	09/14/89	15:00:00.1	37.2359	-116.1629	0.00	4.70		20	NUCU	Disko Elm	DOE	7	45
1989304	10/31/89	15:30:00.1	37.2631	-116.4907	0.00	5.70	20	150	NUCU	Hornitos	DOE	9	102
1989319	11/15/89	20:20:00.1	37.1065	-116.0134	0.00			20	NUCU	Muleshoe	DOE	7	48
1989342	12/08/89	15:00:00.1	37.2311	-116.4094	0.00	5.50	20	150	NUCUG	Barnwell	DOE	9	42
1989354	12/20/89	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Whiteface-A	NV209	4	0
1990069	03/10/90	16:00:00.1	37.1125	-116.0552	0.00	5.10	20	150	NUCU	Metropolis	DOE	8	235
1990096	04/06/90	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Bowie	NV209	3	0
1990164	06/13/90	16:00:00.0	37.2616	-116.4201	0.00	5.70	20	150	NUCU	Bullion	DOE	7	371
1990172	06/21/90	18:15:00.0	36.9928	-116.0045	0.00	4.10		20	NUCU	Austin	DOE	6	202
1990206	07/25/90	15:00:00.1	37.2069	-116.2143	0.00	4.70		20	NUCU_SALVO	Mineral Quarry	DOE	7	199
1990263	09/20/90	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU_SALVO	Sundown-A	NV209	4	0
1990270	09/27/90	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Ledoux	NV209	3	0
1990285	10/12/90	17:30:00.1	37.2479	-116.4942	0.00	5.60	20	150	NUCU	Tenabo	DOE	7	227
1990318	11/14/90	19:17:00.7	37.2274	-116.3712	0.00	5.40	20	150	NUCUG	Houston	DOE	8	740
1991067	03/08/91	21:02:45.1	37.1044	-116.0740	0.00	4.30		20	NUCU_SALVO	Coso-Bronze	DOE	9	181
1991094	04/04/91	19:00:00.0	37.2961	-116.3129	0.00	5.60	20	150	NUCU	Bexar	DOE	7	165
1991106	04/16/91	15:30:00.1	37.2454	-116.4416	0.00	5.40	20	150	NUCU	Montello	DOE	7	344
1991227	08/15/91	16:00:00.0	37.0873	-116.0018	0.00	4.40		20	NUCU	Floydada	DOE	5	0
1991257	09/14/91	19:00:00.0	37.2256	-116.4281	0.00	5.50	20	150	NUCU	Hoya	DOE	7	0
1991262	09/19/91	16:30:00.1	37.2357	-116.1664	0.00	4.00		20	NUCU	Distant Zenith	DOE	6	0
1991291	10/18/91	19:12:00.0	37.0634	-116.0453	0.00	5.20	20	150	NUCU	Lubbock	DOE	7	0

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jdate	date	time	latitude	longitude	depth	mb	yield	ymax	type	evname	source	#orid	#wf
1991330	11/26/91	18:35:00.1	37.0965	-116.0696	0.00	4.60		20	NUCUG	Bristol	DOE	6	0
1992086	03/26/92	16:30:00.0	37.2725	-116.3598	0.00	5.50	20	150	NUCU	Junction	DOE	5	15
1992121	04/30/92	00:00:00.0	37.0000	-116.0000	0.00			20	NUCU	Diamond Fortune	NV209	3	0
1992171	06/19/92	16:45:00.0	37.0054	-116.0101	0.00			20	NUCU	Victoria	DOE	5	0
1992175	06/23/92	15:00:00.1	37.1239	-116.0312	0.00			20	NUCU_SALVO	Galena-Yellow	DOE	7	0
1992262	09/18/92	17:00:00.0	37.2069	-116.2099	0.00	4.40		20	NUCU	Hunters Trophy	DOE	7	0
1992267	09/23/92	00:00:00.0	37.0000	-116.0000	0.00	4.40		20	NUCU	Divider	NV209	4	0

Unknown

jdate	date	time	latitude	longitude	depth	mb	yield	yield_max	type	evname	source	#orid	#wf
1979265	09/22/79	03:00:00.0	-46.3600	37.5700	0.00				A	-	TCARTER	2	0